ENVIRONMENTAL WORKS

Stormwater Pollution Prevention Plan (SWPPP)

SWPPP Prepared For:

Coastal Energy Corporation
1 Coastal Drive
Willow Springs, Howell County, MO

SWPPP Prepared By:

Environmental Works, Inc.
1455 E. Chestnut Expy
Springfield, MO 65802
417-890-9500

SWPPP Prepared:

June 2014
Project # 140201

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SWPPP Certification

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Gary Picard Title: Safety Officer

Signature: _____ Date: _____

SWPPP Preparer Qualification Statement

This SWPPP was prepared by Brandy Henderson, under the direct supervision of Thomas Bieker, CHMM of Environmental Works, Inc.

I, Thomas Bieker, declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional. I have the specific qualifications based on education, training, and experience to assess and develop a Stormwater Pollution and Prevention Plan (SWPPP) that complies with the National Pollutant and Discharge Elimination System (NPDES) and Missouri State Operating Permit (MSOP) issued by The MDNR.

Thomas Bieker, CHMM
Program Manager
Environmental Works, Inc.

Brandy Henderson
Associate Scientist
Environmental Works, Inc.

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Foreword

The purpose of the Stormwater Pollution Prevention Plan (SWPPP) is to describe the design, implementation, management, and maintenance of "Best Management Practices" (BMPs) to reduce the amount of pollutants in storm water discharges from operations of the facility. The SWPPP will be amended and updated as appropriate during the term of the stormwater permit.

This SWPPP should be used during normal daily operations and also anytime new operations are performed such as construction of new facilities requiring land disturbance. If additional activities generate storm water runoff and contribute to the potential off-site movement of pollutants, the operators of those sub-processes shall follow the provisions of this SWPPP.

The BMPs in this SWPPP have been developed based on requirements from the Missouri State Operating Permit and guidance provided in the following documents:

- *Developing Your Storm Water Pollution Prevention Plan, A Guide for Industrial Operators (EPA Document 833-B-09-002), February 2009;*
- *SWPPP Template; City of Springfield, MO* http://www.springfieldmo.gov/stormwater/esc/esc_swppp.html;
- *National Menu of Stormwater BMPs (* www.epa.gov/npdes/stormwater/menuofbmps);
- *Industrial Fact Sheet Series for Activities Covered by EPA's MSGP* *http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm*

The SWPPP is a requirement of the Missouri State Operating Permit and the facility shall comply with all conditions of the permit. However, the requirements do not supersede nor remove liability for compliance with county and other local ordinances.

1.0 Facility Description and Contact Information

1.1 Facility Information

Facility Name:	Coastal Energy Corporation
Facility Address:	1 Coastal Drive Willow Springs, MO 65793
County:	Howell

NPDES Permit: MO-0136883 with an expiration of 20 March, 2017. A copy of the permit is included in **Appendix B**.

Is the facility located in Indian Country: No

If yes, name of Reservation: Not Applicable

Federal Facility: No

Estimated area of industrial activity at site exposed to storm water**:** 61.3 acres

Discharge Information

Does this facility discharge into an MS4? No

If yes, name of MS4 operator: Not Applicable

Name(s) of water(s) that receive stormwater from your facility: Eleven Point River

Does the facility discharge into an MDNR Section 303(d) Impaired Water? ☒Yes ☐ No

(http://www.dnr.mo.gov/env/wpp/waterquality/303d.htm)

Are any of your stormwater discharges subject to effluent guidelines? ☒Yes ☐ No

Permit # MO0136883

If Yes, which guidelines apply? Regulated by MSOP as identified in Section 3.8 of this document.

Primary SIC: 2951

Water Quality Expectations

The discharge of stormwater associated with industrial activity must be controlled as necessary to meet applicable water quality standards. The Missouri Department of Natural Resources (MDNR or the Department) expects that compliance with the other conditions in this permit will control discharges as necessary to meet applicable water quality standards. If at any time the facility becomes aware or the Department determines that a stormwater discharge causes or contributes to an exceedance of applicable water quality standards, corrective action will be required.

1.2 Contact Information/Responsible Parties

Facility Operator:

Name:	Coastal Energy Corporation
Address:	1 Coastal Drive
City, State, Zip Code:	Willow Springs, MO 65793
Telephone Number:	417-469-2777

Facility Owner:

Name:	Coastal Energy Corporation
Address:	1 Coastal Drive
City, State, Zip Code:	Willow Springs, MO 65793
Telephone Number:	417-469-2777

SWPPP Contact:

Name:	Gary Picard
Title:	SWPPP Coordinator
Telephone Number:	417-469-2777 or 417-855-0194

1.3 Stormwater Pollution Prevention Team (EPA 833-B-09-002) (2.C))

The stormwater pollution prevention team is responsible for assisting the facility manager in developing the facility SWPPP as well as implementing and maintaining stormwater control measures, taking corrective actions where necessary to address permit violations or to improve the performance of control measures, and modifying the SWPPP to reflect changes made to the control measures. The members of the team are indicated in **Table 1.1**.

Table 1.1 SWPPP Team

Employee, Title	Responsibilities
Gary Picard, Safety Officer	Coordinates employee training, maintains records, obtains storm water samples, conducts inspections, notifications and implements all phases of the SWPPP.
Erik Montgomery, Alternate SWPPP Coordinator	Alternate SWPPP coordinator, assist team leader in ensuring implementation of all phases of the SWPPP, day to day monitoring of all BMP's, implement good housekeeping policy, day to day monitoring of stormwater runoff, monitoring of tanks, pipes, valves, etc. for leaks or spills.

1.4 Activities at the Facility (EPA 833-B-09-002) (3.A))

This section includes a discussion of industrial activities and potential sources including facility description and surface water flow.

The facility is located in Section 32 and 33, Township 27N, Range 9W of the Willow Springs South quadrangle map. The facility occupies approximately 61.3 acres and generates asphalt.

The Coastal Energy Corporations has 37 aboveground storage tanks (ASTs) located at the Bulk Plant Facility. **Figure 1.0** is a Site Location-Topographic map of the area, and **Figure 2.0** shows a generalized site map of the facility. **Figure 3.0** shows tank detail as well as loading and unloading areas.

The Bulk Plant and undeveloped field is roughly 61.29 acres in size and is divided into two main sections; the bulk plant area and the undeveloped field. The bulk plant area consists of approximately 13.67 acres, which has an earthen berm, approximately five feet high. The earthen berm is the primary source of secondary containment for the AST's. This area has a rail spur which allows rail cars, from the BNSF railroad to load and unload liquids (ethanol, liquid asphalt, fuel oil, polymer, and diesel) to and from the facility. A secondary containment captures stormwater accumulation from the 12 ASTs located in Tank

Group 1 and 7 (ethanol and fusel tanks). Stormwater runoff from the remaining ASTs is diverted to an automated pump system located down gradient and is then recirculated within the facility's catchment basin, or if overflow occurs, the stormwater is truck driven to the 40 acre open field and applied to the 28 acre irrigation plot, which maintains a minimum of a 200 foot buffer to the Eleven Point River.

The facility is located within the Eleven Point River drainage basin. There are two stormwater outfalls at the facility, and are shown on **Figure 2** in **Appendix A**. The facility is located on relatively level terrain.

Outfall 001
Outfall 001 collects water that is captured from the secondary containment of Tank Group 1.

Outfall 002
Outfall 002 is a valve within the bermed area that discharges to the Eleven Point River. Discharge from this valve is not permitted except for the storm events specified in the permit. All collected stormwater is pumped and sprayed on field south of the property.

All outfalls shall be clearly marked in the field.

1.5 General Location Map (EPA 833-B-09-002) (3.C))
The site location of the facility is depicted in **Figure 1**, which is included in **Appendix A**. The land surrounding the property includes industrial, undeveloped, and rural properties.

1.6 Site Map (EPA 833-B-09-002) (3.C))
A detailed site map showing the facility is depicted in **Figure 2** (located in **Appendix A**).

2.0 Potential Pollution Sources (EPA 833-B-09-002) (3))

2.1 Industrial Activity and Associated Pollutants (EPA 833-B-09-002) (3.A))

The industrial activity and potential pollutants associated with the facility are summarized in **Table 2.1**. The bulk facility includes 37 ASTs which are set on concrete pads and contain ethanol, liquid asphalt, diesel, fusel, and polymer. Tank Group 7 (ethanol and fusel) are located inside sized concrete secondary containment. These ASTs and materials are shown in Figures in **Appendix A**.

The bulk plant facility (outlined in yellow) is approximately 13.67 acres and has an earthen berm with an approximate five foot tall berm surrounding the facility. A rail spur enters the facility and is used to load and unload the bulk materials for sale. The majority of piping located at the facility is aboveground with the exception of piping from the ethanol tanks to the rail spur. Each valve is equipped with a check valve and/or manual valve to prevent backflow from the tank. Ethanol is loaded through one metered pump located on the south side of the ethanol containment area. Truck loading for fuel oil and liquid asphalt are provided by unmetered pumps and are located near Tank 4.

A broiler, pad-mounted transformer, and off-road diesel are located southeast of the tanks. The broiler is located near the rail spur and is inside a covered building. The pad-mounted transformer is located directly east of the broiler. The off-road diesel is located south of the transformer and has a secondary containment. South of the diesel ASTs are 250 gallon totes of Innovalt n200, liquid inorganic polymers. There are stored on pallets, off the ground and under a canopy.

The automatic pump located down gradient of the bulk tanks is used for stormwater catchment and removal to the facility catchment basin. If/when the facility catchment or the stormwater from the secondary containment is full; the water is then moved via water trucks and land applied to the permitted irrigation field located south and across the Unnamed Tributary # 1.

Potential pollutants from the bulk plant area is from the unloading and loading of, ethanol, fusel, liquid asphalt, ethanol, and polymer at the bulk facility , and diesel from the office and maintenance Area.

A list of petroleum-based oils stored at the facility is included in **Table 2-1**.

Through the MSOP, the Department has identified effluent pollutant concerns for this facility as; Ethyl benzene, Oil and Grease, Total Petroleum Hydrocarbons, Ethanol, and pH. The monitoring requirements and benchmark limitations for these are summarized in **Table 3.3**. Pollution reduction can be achieved by the implementation of the BMP's described in this plan.

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from asphalt generating facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures, intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

Measures to control pollutants at asphalt generating facilities should focus primarily on the storage of materials, chemical storage areas, and equipment storage and service areas. Of primary importance is the control of activities and use of chemicals that have been identified as potential sources of pollutants.

Table 2.1 Description of Exposed Significant Materials and Potential Pollutants

Description of Exposed Material	Potential Pollutant	Period of Exposure	Quantity Exposed	Location	GPS	Method of Storage	BMPs	Associated Outfall	Estimated Qty. per year (gallons)
Tank Group 1	Ethanol	Ongoing	10 ea. 30,000 gallon ASTs	Bulk Facility	36°58'33.17"N 91°57'10.43"W	Steel AST	Sized Secondary Containment & Refer to Table 3.2	001	5,842,916
Tank Group 2	Fusel	Ongoing	2 ea. 20,000 gallon ASTs	Bulk Facility	36°58'33.52"N 91°57'9.98"W	Steel AST	Sized Secondary Containment & Refer to Table 3.2	001	0*
Tank Group 3 through 6	Liquid Asphalt	Ongoing	2,400,000 gallons	Bulk Facility	36°58'31.88"N 91°57'8.77"W	Steel AST	Good Housekeeping & Refer to Table 3.2	002	10,833,310
Tank Group 7	Polymer	Ongoing	2 ea. 30,000 gallons	Bulk Facility	36°58'31.35"N 91°57'7.99"W	Steel AST	Refer to Table 3.2	002	8531
Diesel AST	Diesel	Ongoing	12,000 gallons	Bulk Plant	36°58'28.97"N 91°57'5.84"W	Steel AST	Refer to Table 3.2	002	11,997
250 Gallon Totes	Polymer	Ongoing	Varies	South of Bulk Plant	36°58'28.31"N 91°57'4.67"W	Totes on Crates under canopy	Refer to Table 3.2	002	0
Transformer 1	Transformer Oil	Ongoing	175 gal	Near Broiler	36°58'29.16"N 91°57'5.88"W	Exterior Yard	Refer to Table 3.2	002	175
Trash Dumpsters	Trash	Ongoing	Varies	North of boiler	36°58'28.61"N 91°56'46.60"W	Trash Dumpsters	Refer to Table 3.2	002	416 yards

Method for determining GPS, Google Earth * Facility has eliminated use of product and this potential pollutant will be elimated.

2.2 Spills and Leaks

Table 2.2 is a summary of sites where potential spills or leaks could occur.

Table 2.2 Areas of Site Where Potential Spills/Leaks Could Occur

Location	Impacted Outfall
Bulk Plant ASTs	001 & 002
Diesel AST in Bulk Plant Area	002
Loading/Unloading racks	002
Broiler	002
Pad-mounted Transformer	002
12,000 Diesel AST	002
250 gallon totes of Liquid Polymers	002

Description of Past Spills/Leaks

Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602.

The facility indicated that they have not experienced a reportable spill or release in the 3 years prior to this SWPPP or since it began operations.

2.3 Stormwater Discharge Documentation (EPA 833-B-09-002) (3.A))

Stormwater discharges are defined as stormwater runoff caused by a storm with greater than 0.1 inch of precipitation. Personnel will keep a rain gauge to measure rainfall or will obtain locally available records to document rainfall.

2.3.1 Non-Stormwater Discharge Documentation (EPA 833-B-09-002) (3.A))

The facility was evaluated for possible non-stormwater discharges during a site visit. The Coastal Energy facility is connected to the municipal sanitary sewer system for discharges from restrooms and showers at the center and other process waters such as floor drains inside buildings. There are no other process wastewater or non-stormwater discharges through Outfalls #001 and #002. This condition will be verified during the inspections completed twice per month and documented on the Inspection Log located in **Appendix C** and completed copies maintained in **Appendix D**.

2.4 Sampling Data Summary (EPA 833-B-09-002) (3.B))

All sampling results and Discharge Monitoring Reports (DMRs) will be kept in **Appendix F.**

3.0 Stormwater Control Measures (EPA 833-B-09-002) (4))

3.1 Minimize Exposure (EPA 833-B-09-002) (4.A))

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Paints, solvents, petroleum products, petroleum waste products, process chemicals, and storage containers for these materials (such as drums, totes, cans or cartons) will be stored and used only inside the buildings, or other structures so that the contents of these containers are not exposed to storm water. The facility will prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit.

The facility will provide spill prevention, control and/or management to prevent any spills of these pollutants from entering waters of the state as described in the Spill Prevention, Control, and Countermeasures (SPCC) Plan). The aggregate oil capacity of this facility exceeds 1,320-gallons the therefore the facility has implemented a Spill Prevention, Control, and Countermeasure Plan (SPCC Plan). Secondary containment structures and systems used to implement this requirement will be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.

Containers of petroleum (new oils, used oils, hydraulic oils, etc.), when practicable, will be stored inside buildings and will not be exposed to stormwater.

3.2 Good Housekeeping (EPA 833-B-09-002) (4.B))

Trash containers shall be provided for solid wastes such as shipping wastes, office wastes, and litter, which will be routinely picked up and disposed by a contracted solid waste hauler. The grounds of the facility will be periodically policed to ensure that any blowing paper, trash, and litter that could be carried off the property or into any outfall by winds are removed.

Maintenance of AST storage areas are included with the SPCC plan and will be inspected routinely for leaks and stains. If petroleum leaks are noted, the oily materials will be removed and disposed of in accordance with all applicable federal, state, and local laws, guidance, and regulations.

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage,

waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

3.3 Maintenance (EPA 833-B-09-002) (4.C))

The facility shall prevent the spillage or loss of fluids, oil, grease, or fuel from vehicle maintenance and equipment maintenance and prevent the contamination of stormwater from these substances.

- Vehicle and equipment maintenance involving adding or removing fluids or oil will only be conducted inside the maintenance buildings or proper precautions and Best Management Practices (BMPS) will be taken to minimize spilling.
- Used oil or other petroleum materials will be stored in tanks or drums inside or near the maintenance building and picked up by a vendor for proper disposal or reuse.
- Employees shall remove excessive accumulations of oil and grease using dry cleaning methods (e.g., absorbents, scraping, or sweeping).
- Care will be taken to prevent spills and to utilize products completely before container disposal or recycling, following label directions.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training. All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately. Control measures and industrial equipment maintenance logs are provided in Appendix G and shall be utilized to describe procedures (1) to maintain any of your site's control measures in effective operating condition, and (2) to maintain industrial equipment so that spills/leaks are avoided. Describe where each applicable procedure is being implemented at the site. Include the schedule you will follow for such maintenance activities.

3.4 Spill Prevention and Response (EPA 833-B-09-002) (4.D))

In accordance with the Oil Pollution Act, if at any point the facility has more than 1,320-gallons of aggregate petroleum storage capacity in equal to or greater than 55-gallon containers, the facility must implement the requirements of 40 CFR 112. Requirements of 40 CFR 112 include; maintaining a SPCCP, routine inspections, and routine employee training. The facility has a SPCC Plan that describes procedures to prevent oil releases. This plan describes procedures for inspections of tanks, secondary containment structures, piping, and spill kits as well as employee training.

Care will be used when transferring oil from bulk supply tanker trucks to any tank. Spill kits shall be kept on or near the oil offloading areas in case of minor spills during resupply. Any spills that occur during transfer of product between vehicles or equipment will be cleaned up. Minor spills of new petroleum products or asphalt liquids on dirt surfaces can be excavated and placed in normal solid waste dumpsters or scrap load dumpsters as long as there is no free liquid product within the soil.

Personnel will immediately contact facility management if a spill of any material leaves the property or is greater than 25-gallons. **Table 3.1** contains contact information for the agencies that the owner shall contact with regards to spills.

Table 3.1 Spill Contact Agencies

Name	Phone Number
Missouri Department of Natural Resources	(573) 634-2436
Region VII U.S. EPA	(913) 236-3778
National Response Center (24 hours a day)	(800) 424-8802
Howell County Local Emergency Planning Committee	(417)-274-6454
Local Emergency Services	911
Environmental Works -24hr Emergency Response	(877)-827-9500

3.5 Erosion and Sediment Controls (EPA 833-B-09-002) (4.E))

The facility shall provide sediment and erosion control sufficient to prevent pollution and comply with effluent limitations established in the storm water permit (located in **Appendix B**) for any land disturbance activities. Additional information about generic non-structural and structural BMPs for land disturbance that could be used are summarized below.

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Temporary and Permanent Non-Structural BMPs

The facility utilizes Permanent Non-structural BMPs that include the utilization of existing grass for buffer strips along ditches and drainage courses. Vegetation in place reduces erosion potential in four ways: (1) by shielding the erodible surface from the direct erosive impact of raindrops; (2) by improving the water storage porosity and capacity so more water can infiltrate into the ground; (3) by slowing the runoff and allowing the sediment or fines to become deposited on site; and (4) by physically holding the soil in place with plant roots. The facility shall utilize good housekeeping practices as well as employee education and training programs.

Temporary and Permanent Structural BMPs

An approximate 5 foot earth berm encompasses the bulk plant facility and protects stormwater from discharging into the Eleven Point River. Additional BMPs used at the facility may include silt fencing for control of sediment and particulates. If required, these materials could be placed on the ground surface upstream of the outfalls. Other structural BMP's may include oil-adsorbent booms placed on the ground near silt fencing to intercept and remove oils that may be contained in stormwater runoff.

3.6 Management of Runoff (EPA 833-B-09-002) (4.F))

The SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

Implement BMPs, such as those listed below in **Table 3.2** in **Appendix J** for the control of pollutants at fabricated metal product manufacturing facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the facility in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 3.2 in **Appendix J** are broadly applicable to all types of manufacturing facilities; however, this is not a complete list and you are recommended to continuously evaluate and update your facilities potential pollution sources and recommended BMP.

Runoff within the facility is allowed to infiltrate due to the gentle slope of the topography. Measures are taken to note runoff and further BMPs will be implemented as needed. The facility is surrounded by an earthen berm which contains stormwater and prevents runoff.

3.7 Salt Storage or Piles Containing Salt (EPA 833-B-09-002) (4.G))

The facility does not stockpile salt.

3.8 MSOP Sector-Specific Effluent Limits (EPA 833-B-09-002) (4.H))

The facility is subject to the requirements of the stormwater permit issued by the MDNR. The permit contains water quality standards, monitoring requirements, and benchmark limitations.

3.8.1 MSOP Sector-Specific Non-Numeric Effluent Limits

To the extent required by law, discharges to waters of the state shall not cause a violation of Missouri Water Quality Standards (10 CSR 20-7.031), including both specific and general criteria. General Criteria shall be applicable to all waters of the state at all times, including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the conditions listed below:

- Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits, or prevent full maintenance of beneficial uses;
- Waters shall be free from oil, scum, and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor, or prevent full maintenance of beneficial uses;
- Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life;
- There shall be no significant human health hazard from incidental contact with the water;
- There shall be no acute toxicity to livestock or wildlife watering;
- Waters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community;
- Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment, and waste as defined in Missouri Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247, RSMo.

3.8.2 MSOP Sector-Specific Numeric Effluent Limits

The monitoring requirements and benchmark limitations are listed in **Table 3.3** and are applicable to the facility's discharge. The benchmarks do not constitute direct numeric effluent limitations. A benchmark exceedance alone, therefore, is not a permit violation. Benchmarks are used to determine the

effectiveness of the SWPPP and BMPs to determine whether improvements are needed. If a sample exceeds a benchmark, the facility must review the SWPPP and Best Management Practices (BMPs) to determine what improvements or additional controls are needed. Failure to improve BMPs to address a benchmark exceedance and achieve compliance is a permit violation. Exceedances believed to be the result of legacy chemical use at the facility are not exempted from this requirement. The facility may demonstrate via a Corrective Action Report that the benchmark value cannot be achieved through the application of BMPs representing the available technology; the benchmark is not feasible because no further pollutant reductions are technologically available or economically practicable in light of best industry practice. This demonstration shall be documented in the facility's SWPPP.

Table 3.3 Monitoring Requirements and Benchmark Limitations

Parameter	Monitoring Requirement		Benchmark Limitation
	Daily Max	Monthly Average	
Outfall 001 & 002			
Ethylbenzene	0.32mg/L	0.32 mg/L	
Oil and Grease	15 mg/L	10 mg/L	10 mg/L
pH	**	**	6.5-9.0 Standard Units
Total Petroleum Hydrocarbons	10 mg/L	10 mg/L	
Ethanol	*	*	
Total Suspended Solids			100 mg/L
Settleable Solids			1.0 mL/L/hr
Outfall 001 Fuel Storage Secondary Containment (Notes 1 & 2)			
Rainfall	*		*
Volume Pumped	*		
Outfall 002 No Discharge Stormwater (Notes 1 & 2)			
Rainfall	*		
Volume Pumped	*		
Outfall 001 & 002			
Volume Irrigated	*		
Application Area	*		
Application Rate	*		

*Monitor and Report

**pH is measured in pH units and is not to be averaged. The pH is limited to a range of 6.5-9.0 pH units.

Note 1- Stormwater shall be stored and land applied during suitable conditions so that there is no discharge from the facility or irrigation site. An emergency discharge may occur when excess stormwater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10 year 365 day rainfall or the 25-year 24 hour storm event.

Note 2-Records shall be maintained and summarized into an annual report, which shall be submitted by January 28th of each year for the previous calendar year period. The report shall include the following:

- Record of maintenance and repairs performed during the year, average number of times per months the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- The number of days the facility discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed.

3.9 Employee Training (EPA 833-B-09-002) (4.I))
All employees who work in areas where industrial activities or material handling activities are exposed to stormwater shall receive annual stormwater training. The training will address all aspects of the SWPPP, such as sources of pollutants, BMP's, spill prevention, spill response, good housekeeping, materials management practices as well as site specific information. An example outline of the training has been attached in **Appendix E**. A blank form for documenting the training is also included in the appendix. The MDNR has provided sector specific publications to aid with pollution prevention in manufacturing.

3.10 Non-Stormwater Discharges (EPA 833-B-09-002) (4.J))
The facility was evaluated for possible non-stormwater discharges during a site visit. No discharge was noted during this time. The permit for this facility authorizes the discharge of stormwater only, originating from the asphalt production manufacturing industry.

3.11 Waste, Garbage and Floatable Debris (EPA 833-B-09-002) (4.K))
Trash containers shall be provided for solid wastes such as office waste, garbage, and litter, which are routinely picked up by a contracted solid waste hauler. The collected waste shall be disposed of at a permitted solid waste landfill.

3.12 Dust Generation and Vehicle Tracking of Materials (EPA 833-B-09-002) (4.L))
Dust Generation at the site shall be evaluated as needed and measures will be taken to mitigate fugitive migration and off-site tracking of raw, final, or waste materials. The facility utilizes rail transport and in lieu of bulk trucks to transport product off-site which minimizes dust generation. Any bulk storage supplies of gravel are covered by a tarp.

4.0 Schedules and Procedures for Monitoring (EPA 833-B-09-002) (5))

4.1 Stormwater Sampling

Outfall 001 and 002 shall be monitored for rainfall amounts and volumes pumped and the data shall be summarized in a yearly report.

Stormwater runoff samples must be collected only if stormwater is discharged from outfall 002 and utilized for irrigation of the field. This sampling should occur monthly if irrigating.

Sampling shall also be accomplished in the event of an emergency discharge if rainfall exceeds the 1 in 10 year or the 24 hour, 25 year rainfall amounts.

Copies of stormwater sampling data may be kept in **Appendix F** with the completed inspection logs. All sampling data must be kept for a period of three years after the permit has been terminated.

5.0 Inspections (EPA 833-B-09-002) (5))

5.1 Inspection Objectives

All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. Any structural or maintenance problems shall be noted in an inspection report and corrected within **seven calendar days** of the inspection. If weather conditions make it impossible to correct the problem within **seven days**, a detailed report, including pictures, must be filed with the regular inspection reports. The permittee shall correct the BMP problem as soon as weather conditions allow. The facility may submit a written request to the department justifying additional time, if necessary, to complete corrective measures.

5.2 Inspection Reports

The facility BMPs are required to be inspected on a regularly scheduled basis, at least **once per month** to ensure that structures are properly maintained and effective, and that any BMPs are continually implemented and effective.

These inspections shall be conducted by the person in charge of the Stormwater Pollution Prevention Team, a person trained by and directly supervised by this person, or through a third party vendor with the appropriate training and site knowledge. A log of each inspection and copy of the inspection report must be retained on the site and made available to the Department upon request. A blank copy of an inspection report and completed copies are included in **Appendices C and D**.
The inspection report contains the following information:

- Inspector's name
- Date of inspection.
- BMP location and condition.
- Effectiveness of BMPs and problems.
- Any spills, leaks or maintenance needs of any of the structures or practices.
- Actions taken to or necessary to correct or repair the observed problems.
- Non-stormwater discharge location and correction.
- Signature of the person designated within this SWPPP to conduct the inspections

6.0 Documentation to Support Eligibility under Other Federal Laws

6.1 Documentation Regarding Endangered Species

According to the Missouri National Heritage Program the possibility of six federally listed Endangered or Threatened species may exist in Howell County, MO. The species are summarized in **Figure 6.1.** A limited search of the facility has been conducted and none of the species listed were found on this site. http://www.fws.gov/midwest/Endangered/lists/missouri-cty.html

Figure 6.1 USFWS Endangered Species List (Howell County)

Howell	Gray bat (*Myotis grisescens*)	Endangered	Caves
	Indiana bat (*Myotis sodalis*)	Endangered	Hibernacula = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Northern long-eared bat *Myotis septentrionalis*	Proposed as Endangered	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Ozark hellbender (*Cryptobranchus alleganiensis bishopi*)	Endangered	Rivers and streams of the Ozark Plateau
	Decurrent false aster (*Boltonia decurrens*)	Threatened	Disturbed alluvial soils
	Virginia sneezeweed (*Helenium virginicum*)	Threatened	Sinkhole ponds under stressed conditions (i.e., variable hydroperiod, low pH soils, high levels of aluminum and arsenic, low levels of macronutrients and boron)

6.2 Documentation Regarding Historic Properties

According to the Missouri National Register Listing the Property and adjoining properties are not recognized as Historic Properties. http://www.dnr.mo.gov/shpo/mnrlist.htm

6.3 Documentation Regarding NEPA Review

The facility's NPDES permit is administered through the MDNR and therefore NEPA review is not required.

7.0 SWPPP Revisions

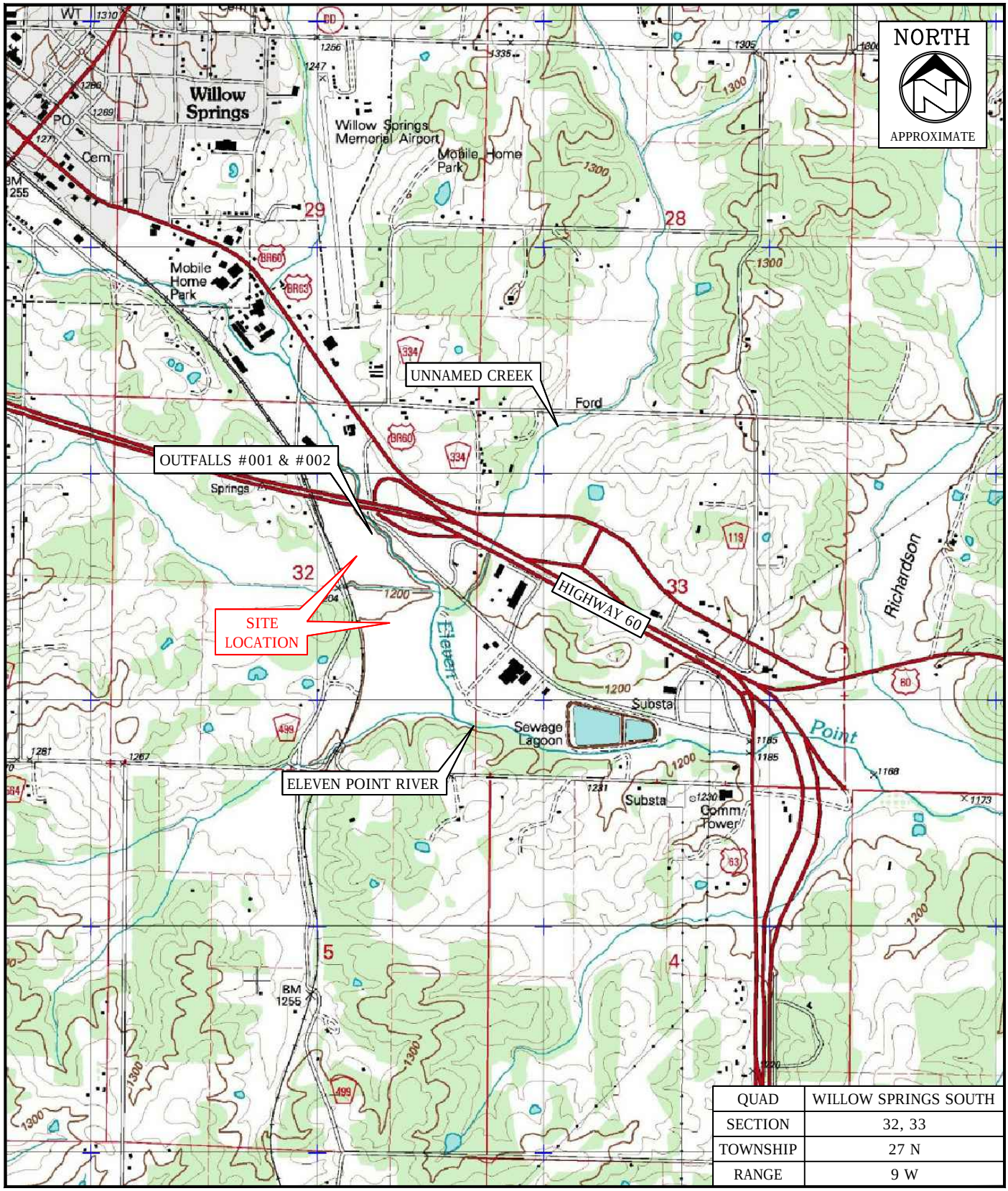
The SWPPP will be amended and updated as appropriate during the term of the operation and/or land disturbance activity. The SWPPP will be amended, at a minimum, whenever the:

- Design, operation, or maintenance of BMPs is changed;
- Design of the operation or land disturbance is changed that could significantly affect the quality of the stormwater discharges;
- Inspections indicate deficiencies in the SWPPP or any BMP;
- MDNR notifies the site in writing of deficiencies in the SWPPP;
- SWPPP is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g., there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes);
- MDNR determines violations of Water Quality Standards that may occur or have occurred.

This plan shall be updated when conditions observed at the site indicate that a change is required. Revisions and additions to the SWPPP shall be recorded in **Appendix G**. If the site inspection indicates that BMPs are not meeting the objectives of the plan, corrective action will be implemented within seven days after the observation. If corrective action cannot be implemented within the seven-day limit the facility should request an extension from the MDNR.

APPENDIX A

General Location Map
&
Site Map



QUAD	WILLOW SPRINGS SOUTH
SECTION	32, 33
TOWNSHIP	27 N
RANGE	9 W

SOURCE: www.mapcard.com (2004)

CHECKED BY: E. AUSTIN

EWI# 140201
DRAWN BY: MEK
Oct. 17, 2014

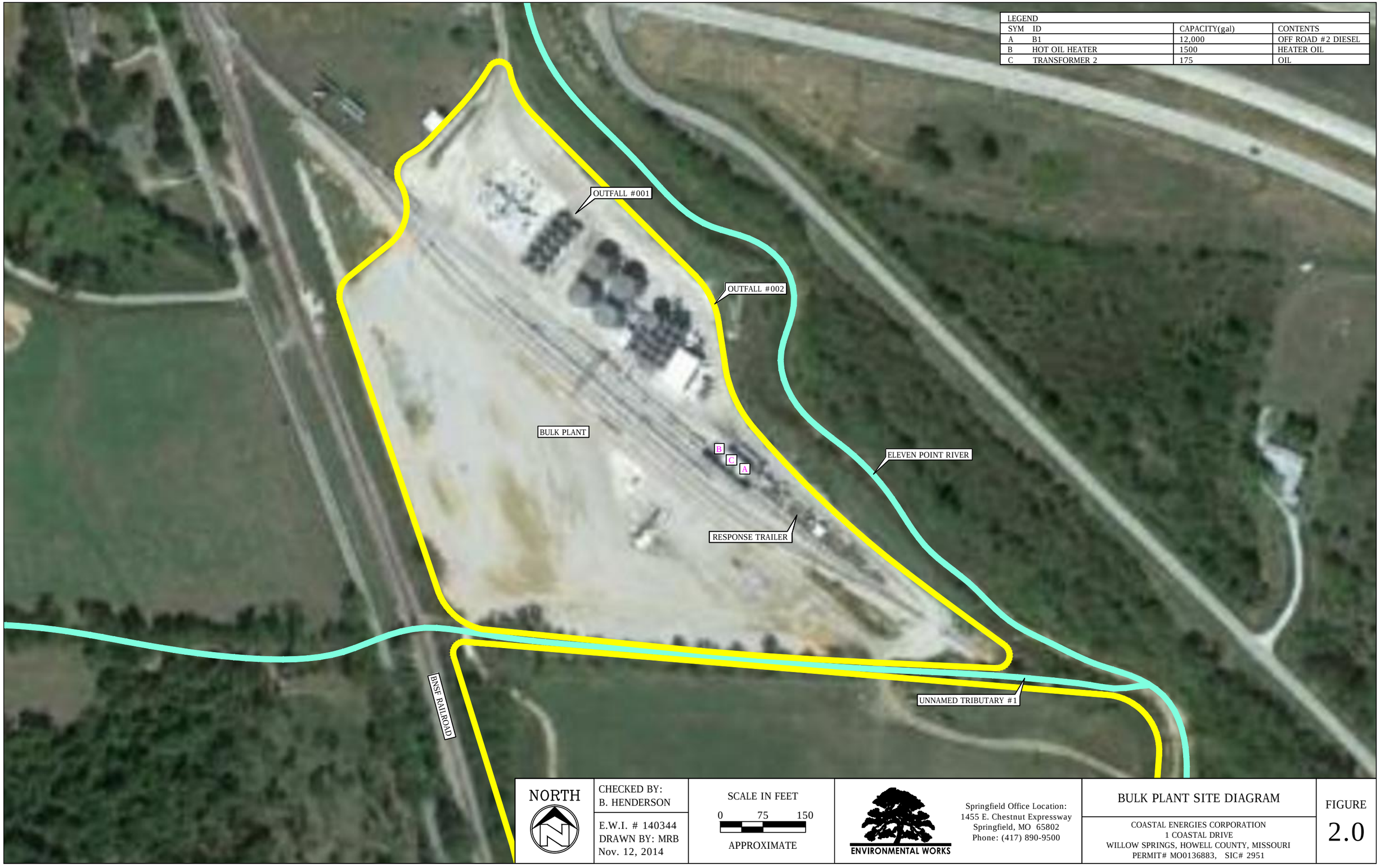
SCALE (FEET)
0 1000 2000
APPROXIMATE

ENVIRONMENTAL WORKS
1455 E. Chestnut Expressway, Springfield, MO 65802

SITE LOCATION-TOPOGRAPHIC MAP

COASTAL ENERGIES CORPORATION
1 COASTAL DRIVE
WILLOW SPRINGS, HOWELL COUNTY, MISSOURI
PERMIT# MO0136883, SIC# 2951

FIGURE
1.0



LEGEND		
SYM ID	CAPACITY(gal)	CONTENTS
A B1	12,000	OFF ROAD #2 DIESEL
B HOT OIL HEATER	1500	HEATER OIL
C TRANSFORMER 2	175	OIL

NORTH

CHECKED BY: B. HENDERSON

E.W.I. # 140344
DRAWN BY: MRB
Nov. 12, 2014

SCALE IN FEET
0 75 150
APPROXIMATE

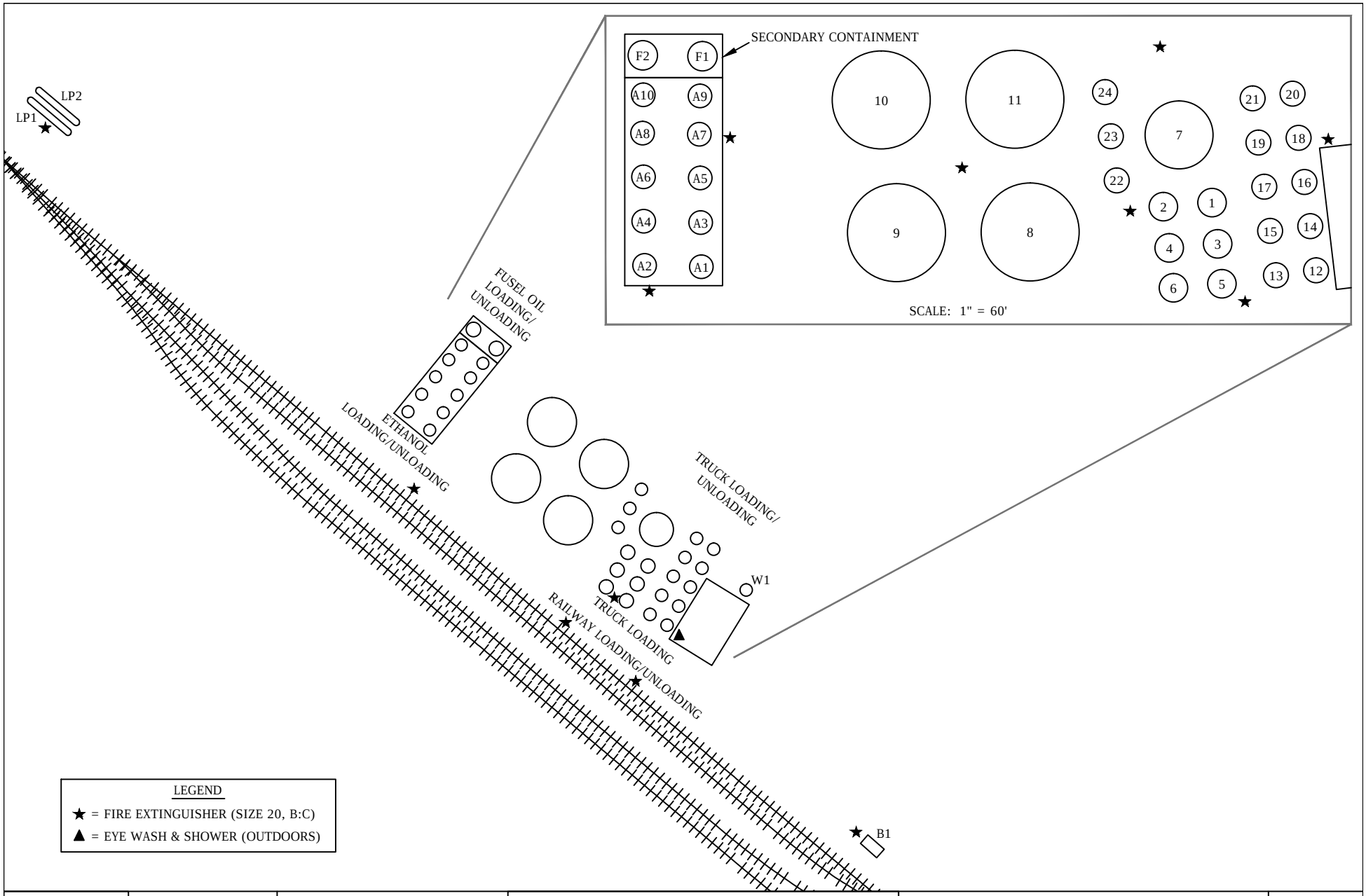
ENVIRONMENTAL WORKS

Springfield Office Location:
1455 E. Chestnut Expressway
Springfield, MO 65802
Phone: (417) 890-9500

BULK PLANT SITE DIAGRAM

COASTAL ENERGIES CORPORATION
1 COASTAL DRIVE
WILLOW SPRINGS, HOWELL COUNTY, MISSOURI
PERMIT# MO0136883, SIC# 2951

FIGURE
2.0



NORTH

CHECKED BY:
B. HENDERSON

E.W.I. # 140344
DRAWN BY: MRB
Nov. 10, 2014

SCALE IN FEET
0 60 120
APPROXIMATE

ENVIRONMENTAL WORKS

Springfield Office Location:
1455 E. Chestnut Expressway
Springfield, MO 65802
Phone: (417) 890-9500

AST DETAIL DIAGRAM
LOADING/UNLOADING AREAS

COASTAL ENERGIES CORPORATION
1 COASTAL DRIVE
WILLOW SPRINGS, HOWELL COUNTY, MISSOURI
PERMIT# MO0136883, SIC# 2951

FIGURE
3.0

APPENDIX B

Missouri State Operating Permit

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended

Permit No.:	MO0136883
Owner:	Coastal Energy Corporation
Owner's Address:	P.O. Box 218, Willow Springs, MO 65793
Continuing Authority:	Same as above
Continuing Authority's Address:	Same as above
Facility Name:	Coastal Energy Corporation
Facility Address:	1 Coastal Drive, Willow Springs, MO 65793
Legal Description:	E ½, Sec. 32, T27N, R9W, Howell County
UTM Coordinates:	#001: X=593240, Y=4092680 #002:X=593436, Y=4092513
Receiving Stream:	Eleven Point River (U)
First Classified Stream and ID:	Eleven Point River (C) 2604
USGS Basin & Sub-watershed No.:	(11010011-0101)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 and #002 - Industrial Stormwater - SIC #2951 - **Certified Operator Not Required**
Stormwater from Fuel Storage Secondary Containment and /Land Application
Design flow is less than 1 MGD.

Land Application:

Irrigation areas: 28 acres at design loading
Application rates/acre: 1/8 inch/hour; 1 inch/day; 5 inches/week; 40 inches/year
Field slopes: less than 1 percent
Equipment type: Truck; Vegetation: Grass
Application rate is based on: hydraulic loading rate

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

March 21, 2012
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

March 20, 2017
Expiration Date

Jackie D. Baker
Jackie D. Baker, Environmental Section Chief, Southeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO0136883

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 – Fuel Storage Secondary Containment (Notes 1 & 2)						
Rainfall	Inches	*			daily	total
Volume Pumped	Gallons	*			daily	total
Outfall #002 – No Discharge Stormwater (Notes 1 & 2)						
Rainfall	inches	*			daily	total
Volume Pumped	gallons	*			daily	total
Outfall #001 and #002 – Irrigated Stormwater						
Ethylbenzene	mg/L	0.32		0.32	Once/month	Grab
Oil and Grease	mg/L	15		10	Once/month	Grab
Total Petroleum Hydrocarbons***	mg/L	10		10	Once/month	Grab
pH - Units	SU	**		**	Once/month	Grab
Ethanol	mg/L	*		*	Once/month	Grab
Volume Irrigated	gallons	*			Daily	Total
Application Area	acres	*			Daily	Total
Application Rate	inches/ acre	*			Daily	Total

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2013 .

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitor and report.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

*** The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2); however, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so.

Note 1 – No-discharge facility requirements. Stormwater shall be stored and land applied during suitable conditions so that there is no-discharge from the facility or irrigation site. An emergency discharge may occur when excess stormwater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10 year 365 day rainfall or the 25-year 24-hour storm event.

Note 2 – Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period. The report shall include the following:

(a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;

(b) The number of days the facility discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed.

C. SPECIAL CONDITIONS

1. Emergency Discharge. Outfall 002 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard**

C. SPECIAL CONDITIONS (continued)

Conditions, Part 1, Section B.2.b. Monitoring shall take place once per day while discharging. Test results are due on the 28th day of the month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Parameter	Benchmark
Total Suspended Solids	100 mg/L
pH – Units	6.5 – 9.0 Standard Units
Oil & Grease	10 mg/L
Settleable Solids	1.0 mL/L/hr

2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

3. All outfalls must be clearly marked in the field.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
   (c) That the effluent limit established in part A of the permit will be exceeded.

5. Report as no-discharge when a discharge does not occur during the report period.

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;

C. SPECIAL CONDITIONS (continued)

(5) There shall be no significant human health hazard from incidental contact with the water;
(6) There shall be no acute toxicity to livestock or wildlife watering;
(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

(a) An assessment of all storm water discharges associated with this facility. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
(b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
(c) The SWPPP must include a schedule for monthly site inspections and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. The Department must be notified within fifteen (15) days by letter of any corrections of deficiencies. Deficiencies that consist of minor repairs or maintenance must be corrected within seven (7) days. Deficiencies that require additional time or installation of a treatment device to correct should be detailed in the written notification. Installation of a treatment device, such as an oil water separator, may require a construction permit. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
(d) A provision for designating an individual to be responsible for environmental matters.
(e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

8. Permittee shall adhere to the following minimum Best Management Practices:
(a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
(b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
(c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
(d) Provide good housekeeping practices on the site to keep solid waste from entry into waters of the state.
(e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.

9. The purpose of the SWPPP and the BMPs listed therein is to prevent pollutants from entering waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR20-2.010(56)] of waters of the state, or failed to achieve compliance with benchmarks. Corrective action means the facility took steps to eliminate the deficiency.

10. This permit does not authorize the discharge of spilled materials or petroleum products drained from any equipment (transformers, trucks, cars, bulldozers, motorcycles, etc.). All spills must be **cleaned up** within 24 hours or as soon as possible, and a written report of the incident supplied with the facility's Discharge Monitoring Report. The following spills must be **reported** to the department at the earliest practicable moment, but no greater than 24 hours after the spill occurs:
(a) Any spill, of any material, that leaves the property of the facility;
(b) Any spill, of any material outside of secondary containment and exposed to precipitation, greater than 25 gallons or equivalent volume of solid material.

C. SPECIAL CONDITIONS (continued)

The department may require the submittal of a written report detailing measures taken to clean up the spill within 5 days of the spill. Whether the written report is submitted with the Discharge Monitoring Report or required to be submitted within 5 days, it must include the type of material spilled, volume, date of spill, date clean-up completed, clean-up method, and final disposal method. If the spill occurs outside of normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436. Leaving a message on a department staff member voice-mail does not satisfy this reporting requirement. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the Noncompliance Reporting requirement found in Standard Conditions Part I.

Federal Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

11. This permit does not authorize the discharge of waters other than storm waters. It does not authorize discharges of domestic, cooling water or process wastewaters.

12. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.

13. Once a month on workdays, the tank system shall be visually inspected to identify problem areas that could lead to a leak. Identified problems should be repaired immediately. Areas to inspect include tank foundations, connections, coatings, tank walls, and the piping system for corrosion, leaks, or other physical damage that may weaken the tank system. A log of such inspections and findings shall be kept on-site for a period of five years and made available to staff of the Department of Natural Resources for viewing upon request.

14. Wastewater Irrigation System.
    a. Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.

    b. Irrigation Design. Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:

        (1) No-Discharge System. When the Facility Description is "No-Discharge", wastewater must be stored and irrigated at appropriate times. There shall be no-discharge from the irrigation site or storage lagoon except due to precipitation exceeding either the 1-in-10 year rainfall event for the design storage period or the 25-year-24-hour rainfall event.

    c. Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.

    d. General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.

    e. Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions.

    f. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling; or 50 feet of the property line.

    g. Public Access Restrictions. Public access shall not be allowed to the irrigation site(s).

    h. Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF INITIAL ISSUANCE
OF
MO0136883
COASTAL ENERGY CORPORATION

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major ☐, Minor ☐, Industrial Facility ☒; Variance ☐;
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

Part I – Facility Information

Facility Type: IND
Facility SIC Code(s): 2951

Facility Description:
Stormwater from Fuel Storage Secondary Containment and /Land Application
Design flow is less than 1 MGD.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

☒, - No.

Application Date: 09-28-2011
Expiration Date: N/A
Last Inspection: N/A In Compliance ☐; Non-Compliance ☐

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	Varies	No-Discharge	Stormwater	0.58
002	Varies	No-Discharge	Stormwater	0.58

Outfall #001 & #002
Legal Description: E ½, Sec. 32, T27N, R9W, Howell County
UTM Coordinates: 001: X=593240, Y=4092680 002:X=593436, Y=4092513

Receiving Stream: Eleven Point River (U)
First Classified Stream and ID: Eleven Point River (C) 2604
USGS Basin & Sub-watershed No.: (11010011-0101)

Receiving Water Body's Water Quality & Facility Performance History:

Facility sits on the headwaters of the Eleven Point River, as such, facility is not permitted to discharge and is not eligible for applicable general permits.

Comments:
Outfall 002 is a valve within the bermed area that discharges to the Eleven Point River. Discharge from this valve is not permitted except for the storm events specified in the permit. All collected stormwater is pumped and sprayed on field south of the property.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable ☒; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:
As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]: ☐
- Lake or Reservoir [10 CSR 20-7.015(3)]: ☐
- Losing [10 CSR 20-7.015(4)]: ☐
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]: ☐
- Special Stream [10 CSR 20-7.015(6)]: ☒
- Subsurface Water [10 CSR 20-7.015(7)]: ☐
- All Other Waters [10 CSR 20-7.015(8)]: ☐

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	EDU**
Eleven Point River	U	-	General, Losing	11010011-0101	Ozark/ Black/ Current
Eleven Point River	C	2604	AQL, CLF, LWW, WBC(B)		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Eleven Point River (U)	0	0	0

MIXING CONSIDERATIONS TABLE:
Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable ☒;
The facility utilizes no discharge land application.

ANTI-BACKSLIDING:
A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

☒ - New facility, backsliding does not apply.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - New and/or expanded discharge, please see **APPENDIX #1 – ANTIDEGRADATION ANALYSIS**

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:
As per [10 CSR 20-6.010(3)(B)], …An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://dnr.mo.gov/env/wpp/pub/index.html, items WQ422 through WQ449.

☒ Not applicable;
This condition is not applicable to the permittee for this facility.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ☒;
The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

Not Applicable ☒;
The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Not Applicable ☒;
A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Not Applicable ☒;
Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):
Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

☒ - Not applicable. This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ☒;
This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable ☒;
A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

VARIANCE:
As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ☒;
This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Not Applicable ☒;
Wasteload allocations were not calculated.

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable ☒;
A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:
Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:
A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable ☐;
Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§§644.051.3

requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc…); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

Not Applicable ☒;
At this time, the permittee is not required to conduct WET test for this facility.

40 CFR 122.41(M) - BYPASSES:
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass, which includes blending, is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☒ – Not Applicable, this facility does not bypass.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):
Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable ☒;
This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Outfall #001 and #002
Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Rainfall	Inches	9	*				
Volume Pumped	Gallons	9	*				
Ethylbenzene	mg/L	2	0.32		0.32		
Oil and Grease	mg/L	2	15		10		
Total Petroleum Hydrocarbons	mg/L		10		10		
pH - Units	SU	2	6.5-9.0		6.5-9.0		
Ethanol	mg/L	9	*		*		
Volume Irrigated	gallons	9	*				
Application Area	acres	9	*				
Application Rate	inches/ acre	9	*				

* - Monitoring requirement only.
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

*** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
**** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Antidegradation Review
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Ethylbenzene, Oil and Grease, Total Petroleum Hydrocarbons, pH**. Parameters are consistent with the effluent parameters found in the General Operating Permit for Fuel Storage.

- **Rainfall, Volume Irrigated, Volume Pumped, Irrigation Area. No-Discharge Facility.** Necessary parameters to determine compliance with No-Discharge Requirements in 10 CSR 20-6.015.

PART VI: Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

☒ Not Applicable;
The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Part VII – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

DATE OF FACT SHEET: JANUARY 19, 2012

COMPLETED BY:

TIM SOUTHARDS
ENVIRONMENTAL ENGINEER
MISSOURI DEPARTMENT OF NATURAL RESOURCES
SOUTHEAST REGIONAL OFFICE
(573)840-9750

Part VII – Appendices

Appendix 1: Antidegradation Evaluation

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

NO DEGRADATION EVALUATION
CONCLUSION OF ANTIDEGRADATION REVIEW

(Submit this form with the appropriate Permit Application)

1. FACILITY

NAME		COUNTY	
Coastal Energy Corporation		Howell	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
1 Coastal Drive	Willow Springs	MO	65793
FACILITY CONTACT		TELEPHONE NUMBER WITH AREA CODE	
Jeff Cunningham		417-469-2777	

2. NO DEGRADATION OPTIONS

- ☐ Renewal without changes
- ☐ Sewer extensions
- ☐ CSO elimination projects
- ☒ No-discharge with land application
- ☐ No-discharge with subsurface irrigation
- ☐ Recycle or reuse of effluent
- ☐ Discharge to a regional wastewater collection and treatment system
- ☐ Addition or replacement of disinfection system for an existing wastewater facility Ultraviolet or Ozone

  The facility will be required to meet regulatory effluent limits for bacteria
- ☐ Addition or replacement for chlorination or dechlorination disinfection system of existing facility

  The chlorination or dechlorination disinfection treatment system design must be for total removal of Total Residual Chlorine. Therefore, the facility will be required to meet the water quality-bases effluent limits determined by the permit writer or the following water quality-bases effluent limits:

Beneficial Use of Classified Water	MDL (µg/l)	AML (µg/l)
Warm water fishery	17	8.2
Cold water fishery	3.3	1.6

Note: These compliance limits for Total Residual Chlorine are much less than minimum quantification level, or ML, of 0.13. The facility will be required to meet regulatory effluent limits for bacteria.

- ☐ Other, please describe: _____

Consulted with Water Protection Staff

NAME	DATE
Tim Southers	09/19/2011

3. NO DEGRADATION PROPOSED PROJECT SUMMARY

Coastal Energy Corporation has ethanol & diesel storage tanks within a concrete secondary containment structure. Since the location is in the floodplain for the Eleven Point River, the DNR Water Pollution Control Program is requiring an application for a site-specific "no-discharge" permit. Any storm water collected with the secondary containment structure will be examined to ensure that there are no visible contaminants, then pumped into a 2,000 gallon water truck which will use the water to irrigate a 40-acre hay field adjacent to and south of the property where the tanks are located. Since a 200' buffer will be maintained between the irrigated area and the river/property lines, the irrigation will be limited to the 28 acres in the center of the 40-acre field.

CONSULTANT: I have prepared or reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the Antidegradation Implementation Procedure and current state and federal regulations.

SIGNATURE	DATE
Curtis Heider	9/22/11

PRINT NAME

Curtis Heider

TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
573-445-3033	heiderenv@centurytel.net

Owner: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE	DATE
Robert Montgomery	9-27-11

TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
417-469-2777	david@coastal-fmc.com

Continuing Authority: Continuing Authority is the permanent organization that will be responsible for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf.

I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE	DATE
Robert Montgomery	9-27-11

TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
417-469-2777	david@coastal-fmc.com

Return completed form with the appropriate Permit Application to:

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
P.O. Box 176
Jefferson City, MO 65102

APPENDIX C

Monthly Inspection Templates
&
Comprehensive (Annual) Inspection Templates

Monthly SWPPP Inspection

Date:_____ **Weather Conditions:**_____

	General Requirements	Yes	No	NA
1	Are collection facilities provided for proper disposal of waste products?			
2	Are all paints, solvents, petroleum products, petroleum waste products and storage containers under roof or other containment?			
3	Any spills, leaks or maintenance needs of any of the structures or practices?			
4	Have all pump discharges that enter waters of the state been recorded?			
5	Are all outfalls clearly marked in the field or clearly identified on a map submitted to MDNR and kept on file in the facility office?			
6	Are all tank systems functioning properly? Visually inspect for problems that could lead to a leak.			
7	Are all tank foundations, connections, coatings, tank walls and piping in good working order and free from corrosion?			

	Water Quality Standards	Yes	No	
8	Are waters free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits?			
9	Are waters free from oil, scum and floating debris in sufficient amounts to be unsightly?			
10	Are waters free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor?			
11	Are waters free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life?			
12	Are waters free from physical, chemical or hydrologic changes that would impair the natural biological community?			
13	Do waters appear to cause no significant human health hazard from incidental contact with the water?			
14	Do waters appear to cause no acute toxicity to livestock or wildlife watering?			
15	Is the water free from any solid waste such as used tires, appliances, equipment, and all other debris?			

	BMP Conditions	Yes	No	NA
16	**Other Possible BMPs** - Condition satisfactory? Describe location, cause of any problems and actions taken below.			
17	**Vegetation** - Reestablished in areas that operations permanently or temporarily stopped? List areas where land disturbance activities have ceased.			
18	**Stormwater Outfalls** - Evidence of erosion or sediment depositions? Describe location, cause of any problems and actions taken below.			
19	**Stormwater Discharges** - Condition satisfactory? Describe location, cause of any problems and actions taken below.			
20	**Non-Stormwater Discharges** - Are there any non-stormwater discharges?			

Please note the location, cause and action taken to correct any unsatisfactory conditions below:

_____

_____

Inspector:_____ **Signature:**_____

Printed Name

Facility Representative:_____ **Signature:**_____

Printed Name

Comprehensive (Annual) Inspection Report

Circle yes or no to the appropriate question and fill in the requested information.

Yes **No** Is the description of the potential pollution sources in this SWPPP current?

If no then list current potential pollution sources: _____

_____

_____

_____

Yes **No** Are any pollutants entering the drainage system via the above potential pollution sources?

If yes then list pollutant, pollution source, and possible action necessary to prevent this discharge.

_____

_____

_____

_____

_____

Yes **No** Is the site map in the SWPPP accurate?

If no, then list necessary changes. _____

_____

_____

_____

Yes **No** Are controls to reduce pollutants identified in the SWPPP being implemented?

If no then identify deficiencies. _____

_____

_____

Comprehensive (Annual) Inspection Report

Circle yes or no to the appropriate question and fill in the requested information.

Yes **No** Do the controls implemented to reduce pollutants appear to be adequate?

If no then identify modification necessary. _____

_____

_____

Yes **No** Does the spill kit at each designated area contain the proper equipment?

If no then identify the equipment missing. _____

_____

_____

_____

Additional Observations/Comments

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title (type or print)	**Area Code and Telephone Number**
Signature	**Date Signed**

APPENDIX D

Completed Monthly Inspections
&
Completed Comprehensive (Annual) Inspections

APPENDIX E

Training Outline
&
Training Records

Example Employee Training Outline

Topic 1 General overview of stormwater permit and pollution planning requirements and introduction to SWPPP team.

Topic 2 List of materials and activities that have the potential to impact stormwater at the facility.

- Tanks
  - Types of tanks and possible pollutants located on site
- Drums of Oil
  - Drum storage areas and types of material stored in drums
- Outside Storage Areas
  - What should or should not be stored outside
- Trash Dumpsters
  - Locations
- Erosion
  - Potential Areas
- Runoff
  - Discussion of stormwater flow and areas of possible pollutant concern
- Maintenance Areas
  - Specific areas of concern with maintenance activities

Topic 3 BMPs related to each of the above topics.

- Tanks
  - Overfill precautions
  - Secondary containment
  - Proper labeling of contents
- Drums
  - Secondary Containment
  - Keep closed
  - Proper labeling
- Outside Storage
  - Ensure equipment is empty, covered, closed before storing outside
- Trash Dumpsters
  - Keep lids closed
- Erosion
  - Areas of potential erosion concern. Rock socks, silt fence, etc…
- Runoff
  - Areas where stormwater leaves property: drains
  - Discuss benefit of vegetation

- Maintenance
    - Good housekeeping
    - Clean spills immediately
    - Proper materials for handling spills
    - Reporting spills
    - BMP Logs and Equipment Maintenance Logs

Topic 4 Pollution Prevention Activities

- Spill prevention
    - Exercise caution
- Spill reporting and response
    - Safety First
    - Contacts
    - Procedures
- Spill response kit locations and training on proper utilization
- Good housekeeping
- Preventative maintenance

SWPPP Personnel Training Form

Date: _____

Instructor: _____

Topics Discussed/Scenario: _____

_____

_____

_____

Attendees: (Please print name)	**Signature:**

APPENDIX F

Laboratory Analysis and DMRs

APPENDIX G

SWPPP Revisions
&
Maintenance Logs

SWPPP Revisions

REVISION	PROPOSED BY: NAME/DATE

Control Measure Maintenance Log

Control Measure: _____
Regular Maintenance Activities: _____
Regular Maintenance Schedule: _____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: _____
- Date Control Measure Returned to Full Function:_____
- Justification for Extended Schedule, if applicable: _____

Notes:
_____
_____
_____

Control Measure: _____
Regular Maintenance Activities: _____
Regular Maintenance Schedule: _____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: _____
- Date Control Measure Returned to Full Function: _____
- Justification for Extended Schedule, if applicable: _____

Notes:
_____
_____
_____

Control Measure: _____
Regular Maintenance Activities: _____
Regular Maintenance Schedule: _____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: _____
- Date Control Measure Returned to Full Function: _____
- Justification for Extended Schedule, if applicable: _____

Notes:
_____
_____
_____

Control Measure Maintenance Log

Control Measure: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Control Measure Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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Control Measure: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Control Measure Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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Control Measure: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Control Measure Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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Industrial Equipment and Systems Maintenance Log

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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____

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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____

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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Industrial Equipment and Systems Maintenance Log

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
____
____

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
____
____

Industrial Equipment/Systems: ____
Regular Maintenance Activities: ____
Regular Maintenance Schedule: ____

Date of Action:
Reason for Action: ☐ Regular Maintenance ☐ Discovery of Problem
If Problem,
- Description of Action Required: ____
- Date Industrial Equipment Returned to Full Function: ______________________________
- Justification for Extended Schedule, if applicable: ______________________________

Notes:
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APPENDIX H

EPA 833-B-09-002
Developing Your Stormwater Pollution Prevention Plan

EPA 833-B-09-002

Developing Your Stormwater Pollution Prevention Plan

A Guide for Industrial Operators

February 2009

Contents

Section 1: **Introduction**

This guide includes suggestions on how to develop a stormwater pollution prevention plan (SWPPP). This guide does not impose any new legally binding requirements on EPA, States, or the regulated community, and does not confer legal rights or impose legal obligations upon any member of the public. In the event of a conflict between the discussion in this document and any statute, regulation, or permit, this document would not be controlling.

Interested parties are free to raise questions and objections about the substance of this guide and the appropriateness of the application of this guide to a particular situation. EPA and other decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from those described in this guide where appropriate.

1.A Why Should You Use This Guide?

You should use this guide if you are an operator of an industrial facility required to develop a stormwater pollution prevention plan (SWPPP) that complies with a National Pollutant Discharge Elimination System (NPDES) industrial stormwater permit issued by your State or the U.S. Environmental Protection Agency (EPA). You may also find this guide to be useful if you are a State or EPA inspector who reviews SWPPPs, or you operate a commercial facility that is not required to obtain an NPDES permit but you are nevertheless interested in ways to minimize stormwater-related pollution at your facility.

Because each State permit can be slightly different, this guide is written more generically in an attempt to make it applicable to as many industrial general permits as possible. Owners and operators of industrial facilities should carefully read their respective industrial stormwater general permit to understand where using this guide may conflict with a State SWPPP requirement, and make adjustments to their SWPPPs as needed. EPA includes additional text describing how to address SWPPP requirements that are specifically included in the Agency's own 2008 Multi-Sector General Permit (MSGP), the "2008 MSGP".

In addition to helping you develop a SWPPP, this guide also includes sections that will assist you in keeping your implementation records and in avoiding common compliance problems, after you are authorized under the EPA 2008 MSGP or your State's general permit. See Section 7 for a discussion of how to keep implementation records. See Section 8 for a discussion of common compliance problems.

SWPPP Tip!

Owners and operators of industrial facilities, which are subject to a State or EPA industrial stormwater general permit typically must develop a SWPPP as a basic requirement. ***If your facility is subject to such a requirement, failing to develop a SWPPP can result in enforcement action against your facility by EPA or a State!*** For example, EPA has targeted enforcement actions against some industrial sectors for failing to have developed SWPPPs for their facilities.

1.B What Is Stormwater Runoff and What Are Its Impacts?

Stormwater runoff is water from rain or snowmelt that does not immediately infiltrate into the ground and flows over or through natural or man-made storage or conveyance systems. When undeveloped areas are converted to land uses with impervious surfaces such as buildings, parking lots, and roads, the natural hydrology of the land is altered and can result in increased surface runoff rates, volumes, and pollutant loads. Stormwater runoff picks up industrial pollutants and typically discharges them directly into nearby waterbodies or indirectly via storm sewer systems. Runoff from areas where industrial activities occur can contain toxic pollutants (e.g., heavy

Tetra Tech

Figure 1. Stormwater runoff can carry pollutants from impervious surfaces to receiving waters.

metals and organic chemicals) and other pollutants such as trash, debris, and oil and grease, when facility practices allow exposure of industrial materials to stormwater. This increased flow and pollutant load can impair waterbodies, degrade biological habitats, pollute drinking water sources, and cause flooding and hydrologic changes to the receiving water, such as channel erosion.

Industrial facilities typically perform a portion of their activities in outdoor areas exposed to the elements. This may include activities such as material storage and handling, vehicle fueling and maintenance, shipping and receiving, and salt storage, all of which can result in pollutants being exposed to precipitation and capable of being carried off in stormwater runoff. Also, facilities may have performed industrial activities outdoors in the past and materials from those activities still remain exposed to precipitation. In addition, accidental spills and leaks, improper waste disposal, and illicit connections to storm sewers may also lead to exposure of pollutants to stormwater.

EPA has identified six types of activities at industrial facilities that have the potential to be major sources of pollutants in stormwater:

- ***Loading and Unloading Operations***

  Loading and unloading operations can include pumping of liquids or gases from tankers to storage facilities, pneumatic transfer of dry chemicals, transfer by mechanical conveyor systems, or transfer of bags, boxes, drums or other containers by forklift or other material handling equipment. Material spills or losses in these areas can accumulate and be washed away during a storm.

- ***Outdoor Storage***

  Outdoor storage activities include storage of fuels, raw materials, by-products, intermediate products, final products, and process residuals. Materials may be stored in containers, on platforms or pads, in bins, boxes or silos, or as piles. Storage areas that are exposed to rainfall and/or runoff can contribute pollutants to stormwater when solid materials wash off or materials dissolve into solution.

- ***Outdoor Process Activities***

  Although many manufacturing activities are performed indoors, some activities, such as timber processing, rock crushing, and concrete mixing, occur outdoors. Outdoor processing activities can result in liquid spillage and losses of material solids, which makes associated pollutants available for discharge in runoff.

- ***Dust or Particulate Generating Processes***

  Dust or particulate generating processes include industrial activities with stack emissions or process dusts that settle on surfaces. Some industries, such as mines, cement manufacturing, and refractories, also generate significant levels of dust that can be mobilized in stormwater runoff.

- ***Illicit Connections and Non-Stormwater Discharges***

  Illicit connections of process wastes or other pollutants to stormwater collection systems, instead of to sanitary sewers, can be a significant source of stormwater pollution. Non-stormwater discharges include any discharge from the facility that is not generated by rainfall runoff (for example, wash water from industrial processes). With few exceptions, these non-stormwater discharges are prohibited. Refer to your permit for a list of authorized non-stormwater discharges.

- ***Waste Management***

  Waste management practices include everything from landfills to waste piles to trash containment. All industrial facilities conduct some type of waste management at their site, much of it outdoors, which must be controlled to prevent pollutant discharges in stormwater.

Section 2: **Getting Started**

2.A Am I Required to Develop a SWPPP?

The Clean Water Act (Section 402(p)) requires that operators of "discharges associated with industrial activity" obtain a National Pollutant Discharge Elimination System (NPDES) permit. EPA regulations (40 CFR 122.26) define the categories of industrial activity required to obtain NPDES permits, and specify the application requirements for these permits. To regulate stormwater discharges from these industrial activities, EPA and authorized States issue NPDES general permits.

Most industrial stormwater discharges are covered under general permits, as opposed to individual permits, although States and EPA can and do issue individual permits to some facilities based on site-specific or industry-specific concerns. General permits are used primarily because they avoid the need to issue multiple permits, and instead only require a single permit to cover a large number of industrial facilities performing similar types of activities. To be covered under a general permit, an eligible operator of an industry must read the general permit, typically develop a SWPPP, comply with any special eligibility provisions, and submit a notice of intent (NOI) or permit application to the permitting authority.

Federal regulations require NPDES permit coverage for stormwater discharges from the following categories of industrial activity:

- Category One (i): Facilities subject to federal stormwater effluent discharge standards in 40 CFR Parts 405-471
- Category Two (ii): Heavy manufacturing (for example, paper mills, chemical plants, petroleum refineries, and steel mills and foundries)
- Category Three (iii): Coal and mineral mining and oil and gas exploration and processing
- Category Four (iv): Hazardous waste treatment, storage, or disposal facilities
- Category Five (v): Landfills, land application sites, and open dumps with industrial wastes
- Category Six (vi): Metal scrapyards, salvage yards, automobile junkyards, and battery reclaimers
- Category Seven (vii): Steam electric power generating plants
- Category Eight (viii): Transportation facilities that have vehicle maintenance, equipment cleaning, or airport deicing operations
- Category Nine (ix): Treatment works treating domestic sewage with a design flow of 1 million gallons a day or more
- Category Eleven (xi): Light manufacturing (For example, food processing, printing and publishing, electronic and other electrical equipment manufacturing, and public warehousing and storage).

SWPPP Tip!

EPA's 2008 Multi-Sector General Permit (2008 MSGP) Applies to a Limited Geographic Area – The 2008 MSGP applies in five States (Alaska, Idaho, New Mexico, Massachusetts, and New Hampshire), Indian Country lands, most territories, and some federal facilities. Alaska will be taking over administration of stormwater permits beginning in 2009. Information on where the 2008 MSGP is available is included as Appendix C of the 2008 MSGP, which can be found at **www.epa.gov/npdes/stormwater/msgp**.

Where Do I Get a Copy of the Industrial Stormwater General Permit in My State?

To determine who issues the industrial stormwater permit in your State, you can visit EPA's stormwater website at **www.epa.gov/npdes/stormwater/authorizationstatus** or the Industrial Stormwater Resource Locator at **www.envcap.org/iswrl**.

Who Is an Operator?

EPA defines the operator of an industrial facility as:

- The entity that has operational control over industrial activities, including the ability to modify those activities, or
- The entity that has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity that is authorized to direct workers at a facility to carry out activities required by the permit). See definition in Appendix A of the 2008 MSGP.

In many cases, the owner and operator are one in the same person. In a few instances, there may be more than one operator at a site (with the owner being an operator based on the definition provided above). Where there is both an owner (without operational control) and an operator, it is the operator's responsibility to obtain permit coverage and comply with the permit provisions.

SWPPP Tip!

What is a SWPPP?

A SWPPP is a site-specific, written document that:

- Identifies potential sources of stormwater pollution at the industrial facility;
- Describes stormwater control measures that are used to reduce or eliminate pollutants in stormwater discharges from the industrial facility; and
- Identifies procedures the operator will use to comply with the terms and conditions of the 2008 MSGP or a State general industrial stormwater permit.

You are required to develop your SWPPP to address the specific conditions at your site and keep it up-to-date to reflect changes at your site both for your use and for review by the regulatory agencies responsible for overseeing your permit compliance.

2.B What Are the Basic Elements Required in a SWPPP?

A SWPPP is a written document that identifies the industrial activities conducted at the site, including any structural control practices, which the industrial facility operator will implement to prevent pollutants from making their way into stormwater runoff. The SWPPP also must include descriptions of other relevant information, such as the physical features of the facility, and procedures for spill prevention, conducting inspections, and training of employees. The SWPPP is intended to be a "living" document, updated as necessary, such that when industrial activities or stormwater control practices are modified or replaced, the SWPPP is similarly revised to reflect these changes.

The process of developing a SWPPP involves the following four steps:

- *Step 1*: Formation of a pollution prevention team of qualified personnel who will be responsible for preparing the plan and assisting the plant manager in implementing practices to comply with the permit;
- *Step 2*: Assessment of potential stormwater pollution sources;
- *Step 3*: Selection of appropriate control measures that minimize the discharge of pollutants during storm events for each of these sources; and
- *Step 4*: Development of procedures for conducting required inspection/monitoring activities, as well as regular maintenance of control measures.

This guide will assist you with these four steps. The selection of a pollution prevention team is discussed in the next section (Section 2.C). Site assessment is addressed in Section 3, the selection of control measures is discussed in Section 4, and inspection/monitoring procedures are addressed in Section 5. The remaining sections of the guide address implementation of practices to comply with the permit and periodic evaluation of your SWPPP.

SWPPP Tip!

Prepare your SWPPP before submitting an NOI or permit application for coverage!

A typical SWPPP includes the following elements:

- Stormwater pollution prevention team;
- Site description;
- Summary of potential pollutant sources;
- Description of control measures;
- Schedules and procedures;
- Documentation to support eligibility considerations under other federal laws; and
- Certification of the SWPPP.

EPA has developed a model **Industrial SWPPP Template**, which can be found in Appendix A, and on EPA's website at **www.epa.gov/npdes/stormwater/msgp**. This template, developed for permit holders subject to the 2008 MSGP, is available in Microsoft Word and can be customized to address SWPPP requirements in different State NPDES permits.

Where your facility has other written procedures in place, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS) developed for a National Environmental Performance Track facility, your SWPPP can reference the portions of those documents in lieu of duplicating that information in your SWPPP. In these instances, you should keep copies of the relevant portions of those documents with your SWPPP.

SWPPP Tip!

EPA's 2008 MSGP includes the requirements for a SWPPP in Part 5 of the permit.

Additional SWPPP Documentation

After you become authorized under the permit, you will need to keep records on any implementation activities required under your permit, including records related to inspections, maintenance, monitoring results, and corrective actions. This additional documentation, although separate from the actual SWPPP, should be kept with the SWPPP so that all of your NPDES stormwater records are filed in one central location (see Section 7).

To assist permittees in their recordkeeping, EPA has developed an **Additional MSGP Documentation** template, which is available at **www.epa.gov/npdes/stormwater/msgp**. This template, developed for permit holders subject to the 2008 MSGP, is available in Microsoft Word and can be modified as necessary to address State-specific permit requirements.

2.C Stormwater Pollution Prevention Team (Step 1)

The first step in developing the SWPPP is to identify the stormwater pollution prevention team. The stormwater pollution prevention team is responsible for assisting the facility manager in developing the facility's SWPPP as well as implementing and maintaining stormwater control measures, taking corrective action where necessary to address permit violations or to improve the performance of control measures, and modifying the SWPPP to reflect changes made to the control measures. Since industrial facilities differ in size and complexity, the number of team members will also vary. The stormwater pollution prevention team should consist of those people on-site who are most familiar with the facility and its operations and responsible for ensuring that necessary controls are in place to eliminate or minimize the impacts of stormwater from the facility.

A key member of the stormwater pollution prevention team (for some facilities, this may be the only member) is the person with primary responsibility for developing and overseeing facility activities necessary to comply with the permit. This should be someone who will be on-site on a daily basis and who is familiar with the facility and its operations. This person will also likely have primary responsibility for ensuring that inspections and monitoring activities are conducted. If an EPA or State inspector visits the facility, this person will be the main point of contact for the SWPPP.

What to Include in Your SWPPP

In your SWPPP, identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. Make sure you keep this information up-to-date as staff members change.

SWPPP Tip!

Consider adding a stormwater management component to employee job descriptions and annual reviews, as appropriate to specific jobs. Often these requirements compliment existing tasks such as maintaining a clean work area; promptly cleaning up spills and leaks; performing regularly scheduled equipment maintenance; and properly storing all chemicals, oils, and other liquid pollutants.

Each member of the stormwater pollution prevention team should have ready access to either an electronic or paper copy of applicable portions of the industrial stormwater general permit and the SWPPP.

SWPPP Tip!

Qualified Personnel – Members of your stormwater pollution prevention team and those conducting inspections and monitoring activities should be "qualified personnel." EPA defines qualified personnel as "those who posses the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures."

2.D What Do I Need to Do to Complete My SWPPP?

After identifying your pollution prevention team, you are ready to complete the next three steps in the development of your SWPPP:

- *Step 2*: Assessing your site and activities (Section 3);
- *Step 3*: Selecting control measures (Section 4); and
- *Step 4*: Developing procedures for inspections and monitoring (Section 5).

Section 6 describes final steps necessary to complete your SWPPP and to obtain permit coverage. Section 7 suggests how records relating to permit compliance should be kept.

Section 3: **Site Assessment and Planning (Step 2)**

This section describes how to collect the information needed for your SWPPP. This information includes:

- *An assessment of the activities performed at your facility* – this assessment will help identify potential pollutant sources.
- *An evaluation of existing sampling data* – a review of sampling data will show where past problems have occurred.
- *Preparing maps of your facility* – site maps will identify the location of industrial activities, pollutant sources, control measures, and the direction of stormwater flow.

3.A Conduct an Assessment of the Activities Performed at Your Facility

The first step in developing a SWPPP is to gain a thorough understanding of the activities conducted and equipment located at your facility to be able to identify potential pollutant discharge concerns. To complete this step, you will need to conduct a detailed walk-through of your facility to identify industrial materials or material handling activities exposed to stormwater (see text box below), any stormwater controls already in place at your facility, the direction of stormwater flow through and from your facility, and the location of all stormwater outfalls. If possible, you should conduct your walk-through during a rain event so that you can observe the flow of stormwater on your site. In addition to your walk-through, you should communicate with fellow site employees who may be more familiar with daily operations than you so that you can thoroughly identify any activities that may contribute stormwater pollutants, but that may not be readily visible during a routine walk-through (e.g., to identify activities that are not performed on a routine basis).

What to Include in Your SWPPP

Develop a list of industrial activities at your site exposed to stormwater. Identify these activities on your site map.

How Does EPA Define Industrial Materials and Material Handling Activities?

Industrial materials or activities **include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products.**
Material handling activities **include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. See 40 CFR 122.26(g).**

The facility assessment will reveal locations where industrial materials or material handling activities may be contributing stormwater contaminants, and help you identify the most important pollutant sources. The following approach is suggested for completing your facility assessment:

Identification of Activities Exposed to Stormwater. As you conduct your facility assessment, make a list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams). Note their location so they can be identified on the site map.

Inventory of Materials and Pollutants. Make a list of the materials and pollutants (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, including pollutants associated with these materials, based on how they are stored, handled, disposed, etc. Note whether these materials are exposed to stormwater, or have the potential to be exposed to stormwater. How materials are stored and handled has a bearing on the potential for stormwater pollution.

What to Include in Your SWPPP

For each of the activities identified above, create an inventory of the materials associated with each activity (this may be easiest to do in a table). Identify whether these materials are or have the potential to be exposed to stormwater. Also, identify any pollutants associated with these materials based on how they are stored, handled, disposed, etc.

Areas with Spill or Leak Potential. Document where potential spills and leaks may occur, and specify the outfall(s) that could be affected by such spills and leaks. Document all significant spills and leaks that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date you prepare or amend your SWPPP. You should consider spillage and leakage of all types of materials when preparing for and documenting such releases.

What to Include in Your SWPPP

Identify locations of potential spills and leaks that could contribute pollutants to stormwater discharges, and the corresponding outfalls that would be affected. Review past records of all significant spills and leaks that occurred in areas exposed to stormwater or that drained to a stormwater conveyance over the past three years, and provide a summary or copy of such records in your SWPPP.

Presence of Non-Stormwater Discharges. A non-stormwater discharge is any discharge from your facility this is not composed entirely of rainfall or snowmelt runoff. Non-stormwater discharges often come from potable water sources or process wastewater discharges. With few exceptions, the discharge of non-stormwater as runoff from your facility is prohibited unless it is specifically allowed under an NPDES permit.

You must evaluate for the presence of non-stormwater discharges and be able to demonstrate that all unauthorized non-stormwater discharges have been eliminated prior to obtaining coverage under a stormwater permit (or that any other discharges are otherwise covered under a different NPDES permit). Conduct your evaluation during a period of dry weather (no rain for at least the previous three days). Walk your site and evaluate each outfall to identify any locations with flowing or stagnant water or discharging liquid; the presence of such water or liquid that would be indicative of a non-stormwater discharge. You should try to identify the source of the water or liquid, and determine if it is one of the allowable non-stormwater discharges identified below or otherwise in need of further action to eliminate the source. You should also identify any indicators of past or intermittent non-stormwater discharges (such as evidence of stains at the outfall).

SWPPP Tip!

Allowable Non-Stormwater Discharges

Most industrial stormwater general permits include a list of non-stormwater discharges that are "allowable" and do not need to be eliminated. As used in EPA's 2008 MSGP, "allowable non-stormwater discharges" are those that while not stormwater discharges, are covered under the terms and conditions of the stormwater permit. These are often discharges that if not covered under a stormwater permit would require coverage under some other NPDES permit. The list of allowable non-stormwater discharges from the 2008 MSGP (Part 1.1.3) includes:

- Discharges from fire-fighting activities;
- Fire hydrant flushings;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
- Routine external building washdown that does not use detergents;
- Uncontaminated ground water or spring water;
- Foundation or footing drains where flows are not contaminated with process materials; and
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

If any non-stormwater discharges are identified during the evaluation, you should take steps to eliminate any that are prohibited under your permit. For example, plug a floor drain, re-route a sink drain to the sanitary sewer, or submit an NPDES permit application for an unauthorized cooling water discharge.

What to Include in Your SWPPP

Documentation of your evaluation for non-stormwater discharges. Typically, this documentation should include:

- The date of any evaluation;
- A description of the evaluation criteria used;
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation;
- The different types of non-stormwater discharge(s) and source locations; and
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified.

Location of Salt Storage. Document the location of any storage piles containing salt used for deicing or that are used for other commercial or industrial purposes. Salt and deicing materials should be stored inside and not exposed to stormwater runoff, if possible.

What to Include in Your SWPPP

If your facility has storage piles containing salt, document the type of material, amount, and its location.

3.B Evaluate Sampling Data

You should evaluate any stormwater sampling data you, or others, collected, from the previous permit term or any time in the past 5 years, which are associated with stormwater discharges from the facility. This includes any analytic sampling data, such as benchmark monitoring or effluent limitation guideline data. The purpose of evaluating your past sampling data is to identify or pinpoint any pollutants of concern, hotspots, or control measures that are not functioning correctly. This information will be useful as you identify and select control measures (described in Section 4).

What to Include in Your SWPPP

A summary of all stormwater discharge sampling data collected at your facility during the previous permit term. You should summarize the data by pollutant, and indicate whether the pollutant parameter exceeded any applicable benchmark or effluent limit.

Include in your SWPPP your evaluation of the data, particularly where pollutants exceeded the 2008 MSGP benchmark values (see SWPPP Tip below). Attempt to identify why that pollutant existed in elevated concentrations, what are the potential sources of that pollutant at your facility, and what potential measures you could use to reduce that pollutant.

SWPPP Tip!

Compare your sampling results to EPA's 2008 MSGP Benchmark values below.

Pollutant	2008 MSGP Benchmark
Ammonia*	2.14 mg/L
Biochemical Oxygen Demand (5 day)	30 mg/L
Chemical Oxygen Demand	120 mg/L
Total Suspended Solids	100 mg/L
Turbidity	50 NTU
Nitrate + Nitrite Nitrogen	0.68 mg/L
Total Phosphorus	2.0 mg/L
pH	6.0 – 9.0 s.u.
Aluminum (T) (pH 6.5 - 9)	0.75 mg/L
Antimony (T)	0.64 mg/L
Arsenic (T)	0.15 mg/L
Beryllium (T)	0.13 mg/L
Cadmium (T)†	0.0021 mg/L
Copper (T)*†	0.014 mg/L
Cyanide	0.022 mg/L
Iron (T)	1.0 mg/L
Lead (T)*†	0.082 mg/L
Magnesium (T)	0.064 mg/L
Mercury (T)	0.0014 mg/L
Nickel (T)†	0.47 mg/L
Selenium (T)*	0.005 mg/L
Silver (T)*†	0.0038 mg/L
Zinc (T)†	0.12 mg/L

(T) Total recoverable

* New criteria are currently under development, but values are based on existing criteria.

† These pollutants are dependent on water hardness. The benchmark value listed is based on a hardness of 100 mg/L. The 2008 MSGP requires industrial facility to analyze receiving water samples for hardness, and use the hardness tables provided in the 2008 MSGP to determine the applicable benchmark value for that facility.

3.C Develop General Location and Site Maps

The final step in the site assessment process is to document the results of your site assessment on a detailed site map. If you have already developed a site map for an earlier permit, you should modify the map as necessary to reflect changes at your facility, including changes to any of your control measures or industrial activities.

Your SWPPP must include both a general location map and a detailed site map. The following is a discussion of what is required for each type.

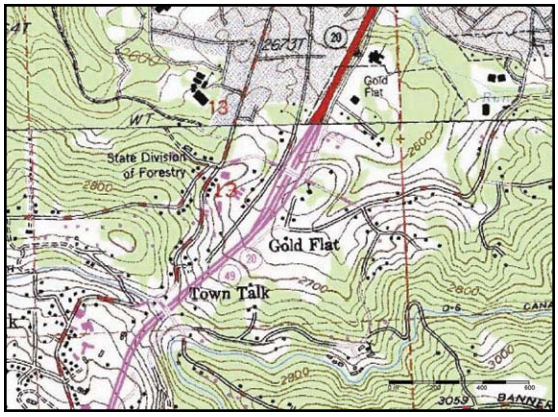

Figure 2. Example general location map.

General Location Map

A general location map is helpful to identify nearby, but not necessarily adjacent, waterbodies around your facility. Include in your SWPPP a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map, or other large scale area map) with enough detail to identify the location of your facility and all nearby receiving waters that may receive your stormwater discharges. Create a USGS map for your area by using the USGS National Map Viewer (**http://nmviewogc.cr.usgs.gov/viewer.htm**). Maps can be printed or saved as PDF documents and inserted into your SWPPP.

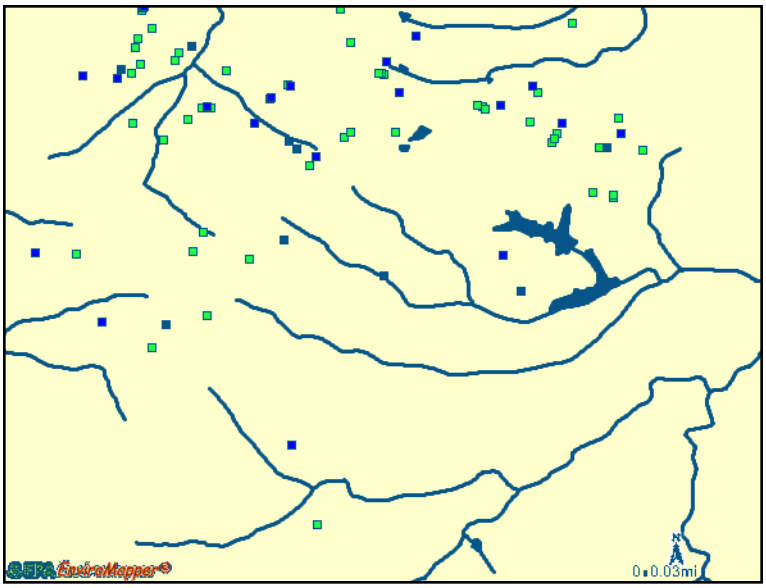

Figure 3. Example general location map.

One free web-based mapping service is EPA's Water Locator Tool, which is available at **www.epa.gov/npdes/stormwater/msgp**. To use the tool, enter your facility address in Step 1, then click on "Window to My Environment" in Step 2 (make sure your pop-up blocker is turned off). You will be able to zoom and reposition the map. When you get the map to the appropriate scale and location, you can copy and paste it into your SWPPP. Use a graphics program or a pen to mark the location of your facility on the map. An example general location map is included in Figure 3.

What to Include in Your SWPPP

Develop a general location map of your facility that shows:

- the location of your facility
- receiving waters to which your facility discharges

It may also be helpful to include roads or political boundaries to better locate your facility.

Site Map

Develop a map of your site that includes, among other things, the footprint of all buildings, structures, paved areas, and parking lots. The site map is intended to show the direction of stormwater flow throughout your facility and the potential pollutant sources that may come into contact with your stormwater runoff.

EPA recommends that you develop a first draft of the site map based on the information collected during your assessment. After you select appropriate control measures (Section 4) and monitoring locations (Section 5), you should revise your site map to reflect this information and any additional changes identified as you develop your SWPPP. If you are unable to fit all the information on one map, use multiple maps to provide a full characterization of the information described above. Also, if activities and conditions change at your site during the term of the NPDES permit, you should update the map as described in Section 6.C of this guide. An example of a site map is included (see Figure 4) and in Appendix C.

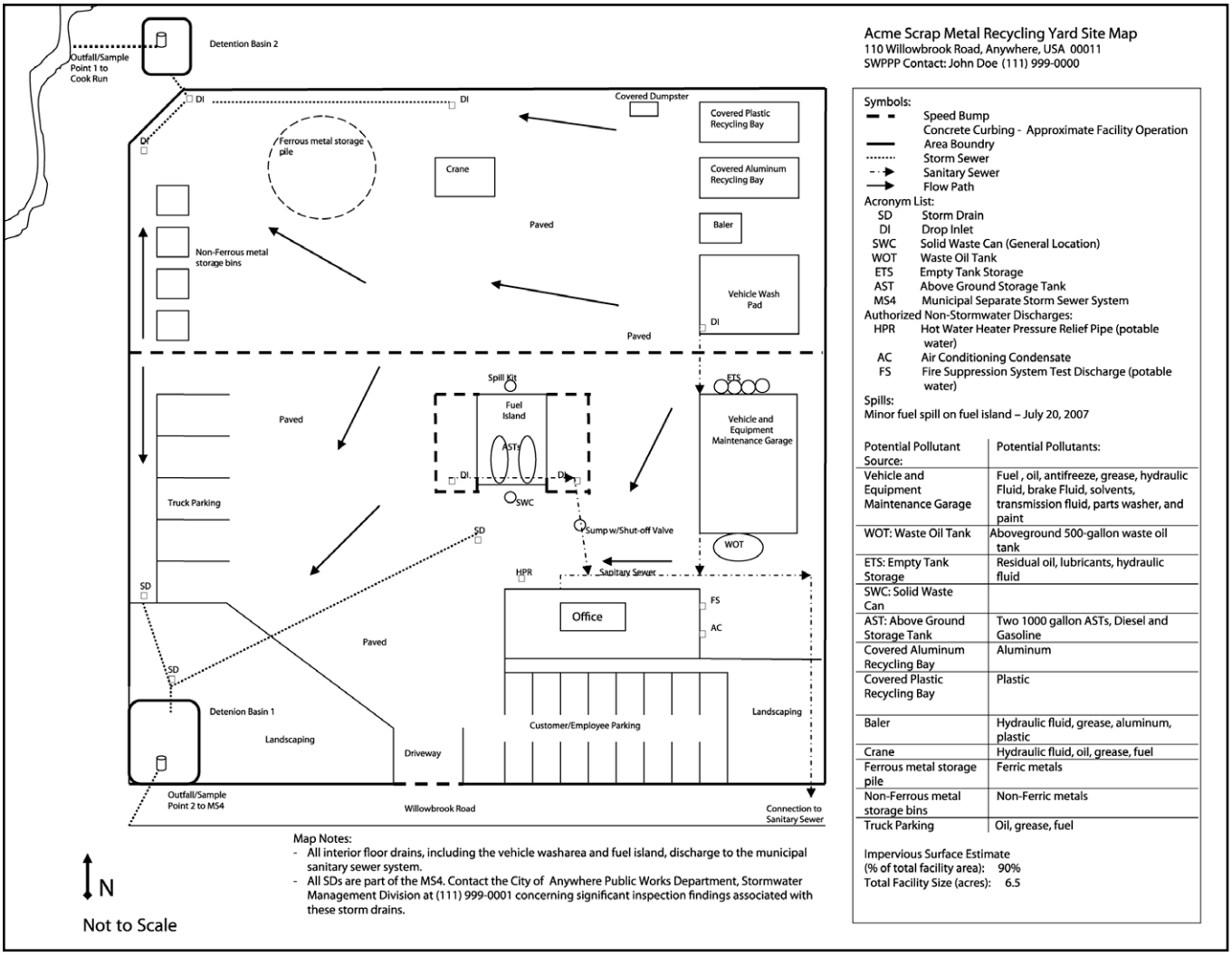

Figure 4. Example site map.

What to Include in Your SWPPP

Include a site map of your facility which includes the items below:

- The size of the property in acres;
- The location and extent of significant structures and impervious surfaces;
- Directions of stormwater flow (use arrows);
- Locations of all existing structural control measures;
- Locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;
- Locations of all stormwater conveyances including ditches, pipes, and swales;
- Locations of potential pollutant sources identified (see Section 3.B);
- Locations where significant spills or leaks have occurred;
- Locations of all stormwater monitoring points;
- Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2, etc), indicating if you are treating one or more outfalls as "substantially identical", and an approximate outline of the areas draining to each outfall;
- Municipal separate storm sewer systems, where your stormwater discharges to them;
- Locations and descriptions of all non-stormwater discharges;
- Locations of the following activities where such activities are exposed to precipitation:
  - Fueling stations;
  - Vehicle and equipment maintenance and/or cleaning areas;
  - Loading/unloading areas;
  - Locations used for the treatment, storage, or disposal of wastes;
  - Liquid storage tanks;
  - Processing and storage areas;
  - Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
  - Transfer areas for substances in bulk; and
  - Machinery; and
- Locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

Section 4: **Selecting Control Measures (Step 3)**

Control measures are the best management practices (BMPs) or other structural or non-structural practices that are used to prevent or reduce the discharge of pollutants in stormwater. Structural control measures, as the name implies, focus on installation of hard structures to control discharges. Structural controls include practices such as vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures. Non-structural control measures are intended to prevent or reduce the generation of pollutants in stormwater and/or the volume of stormwater runoff using practices that focus on facility operations and procedures. Examples of non-structural control measures include procedural practices such as employee trainings and the posting of signs that raise staff awareness to the BMPs and procedures in place to control stormwater pollutants.

SWPPP Tip!

Effluent limits = stormwater control requirements. In the 2008 MSGP, as with most state industrial stormwater general permits, stormwater control measures are those structural or non-structural practices that are used to achieve the permit's effluent limits.

A combination of preventive and active treatment control measures usually results in the most effective stormwater management for minimizing the offsite discharge of pollutants in stormwater runoff. Most control measures require regular maintenance to function as intended. Some control measures have simple maintenance requirements, while others may require more extensive upkeep in order to maximize their performance. Note that identifying weaknesses in current facility practices will help permittees determine appropriate control measures for use at the site.

What does "minimize" mean?

The technology-based limits included in EPA's 2008 MSGP require that you minimize (i.e., defined as reduce and/or eliminate) stormwater exposure to pollutants using control measures that are technologically available, economically practicable, and achievable in light of best industry practice.

General Stormwater Management Principles

In most industrial stormwater permits, including the 2008 MSGP, the site operator is given the flexibility to select the type of control measures, including specific technologies, which he/she believes are best suited to the facility and that will meet the permit's requirements. This flexibility is necessary given the variability of each industrial operation, the differences in the topography from site to site, and the dissimilarities in the activities and materials exposed to stormwater. However, there are certain general principles of stormwater management that are common to all sites, and that can be used by operators in their selection and design of control measures. These general principles, listed below, should be considered as a way to maximize the performance of control measures at your site.

- **Pollution prevention** – The best way to prevent stormwater pollution is to minimize the use of water contaminants in your industrial activities. When selecting control measures for the facility, you should focus on controls that are geared toward reducing pollutants at the source to prevent stormwater pollution. Source control practices include maintaining equipment, picking up trash and debris, training site staff on appropriate spill procedures, and proper materials management and storage.

- **Minimizing exposure** – Another effective way to minimize stormwater pollution is to eliminate opportunities for stormwater to come into contact with industrial activities and polluting materials. You should look for opportunities to relocate industrial activities/materials to covered or contained areas and to properly store and transport any accumulated scrap or waste material.
- **Combining controls** – Combined control measures are often more effective than control measures in isolation. For example, good housekeeping will often go a long way to minimize stormwater pollution but is more effective when combined with minimizing the exposure of significant materials or activities and a structural control, such as inlet protection.
- **Examining your site's pollutant sources** – Understand the type and quantity of pollutants that could contaminate stormwater leaving your facility. Use your knowledge of the potential pollutants to drive your selection and design of effective control measures.
- **Maximizing infiltration** – Onsite infiltration reduces overland runoff, improves groundwater recharge, and augments base flow in local streams. You should look for opportunities to minimize impervious area and increase areas where stormwater can infiltrate on-site. Keep in mind, however, that the use of onsite infiltration typically must be combined with other control measures to avoid ground water contamination.
- **Using existing vegetated areas** – Open vegetated swales and natural depressions can be used to dissipate energy in overland flow and reduce erosion. Vegetated swales and natural depressions can increase infiltration and, in some cases, promote uptake of metals and nutrients by plants.
- **Buffering on-site or adjacent waterbodies or drainage systems** – Maintain or restore vegetated buffer zones between your facility's impervious areas and adjacent surface waters.
- **Using structural practices (as applicable)** – When non-structural control measures are not effective in preventing stormwater contamination, structural control measures (e.g., swirl separators, sand filters, retention basins, etc.) may be needed to treat stormwater before it leaves your facility.

EPA's Technology-Based Discharge Requirements

The following sections describe the 12 categories of discharge requirements (or "effluent limits") required by the 2008 MSGP. Although the wording of these requirements may be unique to the EPA permit, many State permits include requirements that are similar to the 2008 MSGP.

4.A Minimize Exposure

The first step in an effective stormwater control program is minimizing exposure of manufacturing, processing, material storage areas, loading and unloading areas, dumpsters and other disposal areas, maintenance activities, and fueling operations to rain, snow, snowmelt, and runoff by both locating industrial materials and activities inside or protecting them with storm resistant coverings.

SWPPP Tip!

No Exposure Exemption

EPA's regulations recognize the effectiveness of minimizing exposure by allowing facilities to opt out of the permit by submitting a "No Exposure Certification" when all industrial activities are protected from contact with stormwater. The "No Exposure Certification" is included as Appendix K of the 2008 MSGP. Note that industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters or if discharges are authorized under another NPDES permit. Check your State permit for specific requirements for incorporating minimizing exposure into your SWPPP.

Tetra Tech

Figure 5. Minimize exposure by providing cover for potential contaminants.

What to Include in Your SWPPP

Describe all structural controls or practices used to minimize the exposure of industrial activities to rain, snow, snowmelt, and runoff. The SWPPP must describe where the controls or practices are being implemented at your site. The location must also be identified on the SWPPP site map. Examples of exposure-minimizing control measures that could be used at your facility and described in the SWPPP include:

- The location and extent of grading, berms, or curbs used to contain contaminated stormwater or divert stormwater around areas of industrial activity;
- A description of the types of materials and equipment that are stored within secondary containment and the location of contained storage areas;
- The location of spill cleanup kits and a description and schedule for employee spill abatement and cleanup training;
- Proper procedures for leaky vehicles and equipment, such as drip pans; parking in a contained area, or parking indoors;
- The use and location of spill/overflow protection equipment;
- Procedures for long-term storage or disposal of equipment and vehicles, such as draining all fluids;
- The location of covered and/or contained equipment cleaning areas; and
- The disposal method for all wash water, such as an on-site sump (if a sump is used, specify the pumping frequency) or sanitary sewer.

4.B Good Housekeeping

Good housekeeping practices offer a practical and cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. Good housekeeping practices also help to enhance safety and improve the overall work environment. To effectively document in your SWPPP that you are including good housekeeping procedures at your site, you should establish protocols to reduce the possibility of mishandling materials or equipment and train employees in good housekeeping techniques. An effective good housekeeping program not only benefits stormwater quality but makes the facility a clean, safe place for employees and clients.

SWPPP Tip!

Labeling Storm Drains – A good stormwater awareness practice is to label all storm drains on your industrial facility with a "No Dumping – Drains to Stream" or similar message. If select drains at your facility discharge to the sanitary sewer system or to a sump (for example, at a wash rack), you should label those with a "Drains to Sanitary Sewer" or similar message.

Common areas where good housekeeping practices should be followed include areas where trash containers are kept and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of this control measure.

Tetra Tech

Figure 6. Two photos showing an industrial facility before and after it followed good housekeeping practices.

What to Include in Your SWPPP

Describe any practices you are implementing to keep exposed areas of your site clean. Describe where each practice is being implemented at your site. Include here your schedule or approach for:

- Regular pickup and disposal of waste materials and scrap equipment;
- Maintenance of clean work spaces;
- Routine inspections for leaks and of the condition of drums, tanks, and containers;
- Routine inspections to make sure that industrial materials are properly stored and labeled;
- A schedule for sweeping paved areas and floors, including who will perform the sweeping (employee or contractor);
- The individual or position responsible for emptying drip pans placed beneath leaking equipment, valves, and fill lines.

4.C Maintenance

A good maintenance program requires regular inspections, testing, and the preventive maintenance and repair of industrial equipment (stationary and mobile) and industrial systems. Maintenance programs are intended to ensure that structural control measures and industrial equipment are kept in good operating condition and to prevent or minimize leaks and other releases of pollutants (see Section 4.D for more specific information). If you notice a deficiency or otherwise find that your control measures or industrial equipment need to be replaced or repaired to ensure proper functioning, and to avoid leaks or other releases, you must make the necessary repairs or modifications, typically prior to the next wet weather event and as expeditiously as practicable.

Facilities with good maintenance programs will keep a maintenance log that tracks the regular maintenance of industrial equipment and stormwater control measures. The log provides a maintenance history for each piece of equipment and demonstrates to regulatory authorities that you have implemented the maintenance program outlined in your SWPPP.

Tetra Tech

Figure 7. Equipment should receive routine preventative maintenance to prevent drips and leaks.

What to Include in Your SWPPP

Describe procedures to:

- Maintain industrial equipment so that leaks and other releases are avoided, and
- Maintain any of your site's control measures in effective operating condition.

Include the schedule you will follow for such maintenance activities. Describe where each applicable procedure is being implemented at the site.

4.D Spill Prevention and Response Procedures

Spills and leaks, together, are the largest source of industrial stormwater pollution. For this reason, your SWPPP must identify control measures that are used at your site to minimize the potential for spills, leaks, and other releases that may come into contact with stormwater. Among the practices that should be in place at your site are plans for effective response to spills if or when they occur. If your facility has more than 1,320 gallons of oil storage capacity in aboveground tanks you may also be required to develop a Spill Prevention, Control and Countermeasure (SPCC) plan consistent with 40 CFR 112.1.

Tetra Tech

Figure 8. Spill kits should be maintained in areas with spill potential, such as fueling stations.

SWPPP Tip!

Employees must be aware of notification procedures in the event of a spill or leak, including when to contact appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting of spills or other prohibited discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be posted in locations that are readily accessible and available to employees. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge.

What to Include in Your SWPPP

Describe any structural controls or procedures you are putting in place to minimize the potential for leaks, spills, and other releases. At a minimum, your SWPPP should include:

- The location(s) of spill response plans for significant materials;
- A schedule for training employees in spill response procedures;
- Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- The individual or position responsible for making sure the spill kits are complete and ready for use;
- Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases; and
- Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

Describe where each control is to be located or where applicable procedures will be implemented.

4.E Erosion and Sediment Controls

Permits typically require control measures to be selected and implemented to limit erosion on areas of the site that, due to topography, land disturbing activities, soils, cover, materials, or other factors, are likely to experience erosion. In general, erosion control measures, which prevent soil or sediment from becoming mobilized, should be used as the primary line of defense, while sediment control measures, which trap, infiltrate, or settle out mobilized sediments, should be used to back-up the erosion control measures. For instance, erosion control measures, include grading, seeding, mulching, and sodding, that prevent soil from becoming dislodged, should be considered first. Where sediment may be dislodged and potentially mobilized in stormwater runoff, sediment control measures that trap eroded sediment include silt fences, sediment ponds, and stabilized entrances should be considered.

When selecting, designing, installing, and implementing appropriate erosion and sediment control measures, you should consult with your Tribal, State, and local authorities to ensure that you consider the appropriate control measures. EPA's internet-based resources relating to controlling erosion and sedimentation include the sector-specific *Industrial Stormwater Fact Sheet Series*, (**www.epa.gov/npdes/stormwater/msgp**), *National Menu of Stormwater BMPs* (**www.epa.gov/npdes/stormwater/menuofbmps**), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (**www.epa.gov/owow/nps/urbanmm/index.html**).

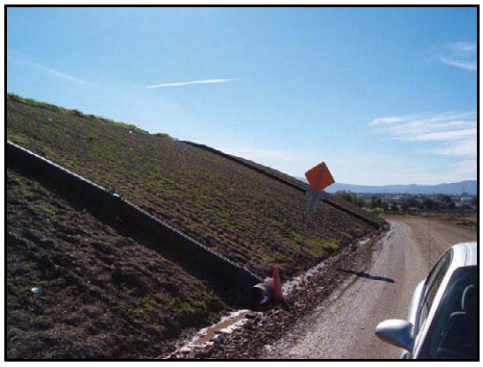

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Figure 9. Slope drains to protect a hillside from erosion.

SWPPP Tip!

Projects that disturb 1 acre or more of land generally require coverage under an NPDES construction general permit (CGP). Information on EPA's 2008 CGP requirements, including links to construction SWPPP resources, is available at **www.epa.gov/npdes/stormwater/cgp**.

What to Include in Your SWPPP

Include the following:

- A narrative description of areas of your site that are susceptible to erosion (note: the site map will also identify these areas);
- A description of erosion and sediment control measures used at your site to stabilize exposed areas and contain runoff to minimize onsite erosion and potential offsite discharges of sediment.

Note: Permits often require flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. Describe in your SWPPP the location of each control implemented at your site.

4.F Management of Runoff

Similar to erosion and sediment controls, the management of stormwater runoff that flows through your site is an effective way to reduce the pollutants that are discharged from your site. Where you employ structures or practices that are intended to divert, infiltrate, reuse, or otherwise reduce stormwater runoff so as to reduce the discharge of pollutants, your SWPPP must include a description of those controls. Appropriate measures are highly site-specific, but may include vegetative swales, berms, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

Tetra Tech

Figure 10. Vegetated berm used to prevent facility inundation when the river is at flood stage.

As mentioned previously, a combination of preventive and treatment control measures usually results in the most effective approach to stormwater management for minimizing the offsite discharge of pollutants in stormwater runoff.

SWPPP Tip!

When selecting control measures, be careful not to violate local building or fire codes and other ordinances. An example would be constructing a shed for storage of chemicals and then finding out from the fire department that you are in violation for locating the shed too close to the main building, not equipping the shed with sprinklers or other fire control device, and not properly labeling containers.

What to Include in Your SWPPP

Include the following:

- A description of controls used at your site to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff.
- A description of locations at your site where each control will be implemented.

4.G Salt Storage Piles or Piles Containing Salt

Salt is commonly used for deicing and other commercial or industrial purposes, including maintenance of paved surfaces. Salt piles or piles that are predominantly composed of other materials that contain some salt typically must be covered or enclosed and otherwise isolated from coming into contact with stormwater (e.g., good housekeeping, diversions, containment). Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

To effectively document in your SWPPP that you are minimizing exposure of these piles to stormwater, you should consider creating a checklist to verify that salt loading and offloading operations occur within contained areas with appropriate measures in place to prevent the track out of salt from the contained areas.

Tetra Tech

Figure 11. Salt pile covered with a tarp.

What to Include in Your SWPPP

Include the following:

- The identification of salt storage piles or piles containing salt, and a description of structures at your site covering or enclosing such piles, or that prevent the discharge of stormwater from such piles.
- If tarps are used to cover piles, the SWPPP should describe procedures for when tarps will be placed over the piles.
- A description of any controls or procedures used to minimize exposure resulting from adding to or removing materials from the pile.
- The locations at your site where each control and/or procedure are implemented. Note that these locations must be identified on the SWPPP site map as well.

4.H Sector-Specific Requirements

Most industrial stormwater general permits regulate discharges of stormwater from a number of different industrial sectors. For instance, EPA's 2008 MSGP regulates discharges from 29 different industrial sectors. These "sectors" consist of similar facilities categorized by the nature of their industrial activity, type of materials handled, and material management practices employed. The sectors are structured to a large extent on the definition of "stormwater discharge associated with industrial activity" found at 40 CFR 122.26 (b)(14)(i)–(ix), (xi), under which many sectors are identified based on their standard industrial classification (SIC) code.

Review your industrial stormwater general permit to determine if there are additional sector-specific discharge requirements (or "effluent limits") for which your type of industrial activity are subject. If so, you will need to specifically document how you will comply with those requirements in your SWPPP. Not all sectors will necessarily have additional sector-specific discharge requirements. For example, Sector N of EPA's 2008 MSGP includes specific requirements for scrap recycling and waste recycling facilities as defined by SIC Major Group Code 50 (5093). One of the specific Sector N discharge requirements is to "minimize surface runoff from coming in contact with scrap processing equipment." Alternatively, the Chemical and Allied Products Manufacturing, and Refining sector (Sector C) does not have any sector-specific discharge requirements in the 2008 MSGP.

Note that, if covered by the 2008 MSGP, you are responsible for complying with sector-specific requirements associated with your primary industrial activity and all co-located industrial activities. Co-located industrial activities are industrial activities, excluding your primary industrial activity, located on-site that are also required to be covered by the 2008 MSGP or a State general permit. Statewide general permits may have different requirements for specific industrial sectors.

SWPPP Tip!

Sector-specific requirements for the 2008 MSGP – All sector-specific requirements can be found in Part 8 of the 2008 MSGP.

Sector-specific fact sheets – EPA has developed fact sheets specific to the industrial activities, pollutants and control measures used at each of the 29 sectors covered by the 2008 MSGP. These sector fact sheets can be found at **http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm**.

What to Include in Your SWPPP

Include the following:

- The industrial sector, or sectors, applicable to the permitted site.
- A discussion of the control measures implemented to address sector-specific requirements, if applicable, consistent with Part 8 of the 2008 MSGP.
- The location of each control and/or procedure used to comply with the sector-specific requirements.

4.1 Employee Training

Stormwater training is required for all employees who work in areas where industrial activities or material handling activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit. These employees include inspectors, maintenance personnel, and all members of your Pollution Prevention Team. The training session or sessions are expected to cover the contents of the facility SWPPP, control measures implemented to achieve compliance with applicable discharge requirements, spill containment and cleanup procedures, maintenance, monitoring, inspection, planning, reporting, and documentation requirements.

EPA recommends that training be conducted for any applicable employees at least annually and whenever a new employee starts who meets the description above. You should have a sign-in/sign-out sheet at each training class to document that employees have participated. Keep the sign-in/sign-out sheet with your SWPPP.

What to Include in Your SWPPP

Include the following:

- Person(s) responsible for conducting the training (a member of the Pollution Prevention Team, contractor, or other?)
- The employees or positions that will receive stormwater training.
- The frequency of stormwater training sessions (annually, upon hire, or other). EPA recommends at least once per year. For example, the SWPPP might state that stormwater training will be conducted annually in September so employees are ready for the upcoming wet weather season.
- The stormwater topics covered during the training session or sessions.
- The sign-in/sign-out sheets from the training session.

SWPPP Tip!

Customize the employee training to the issues at your facility, and ensure that employees are trained on the control measures they are expected to implement. Among the topics you cover in your training should be some of the basic principles of stormwater management. For example, you should convey that:

- Stormwater pollution occurs when rainfall runoff picks up pollutants from the ground or areas exposed to rainfall.
- Polluted stormwater can cause significant water quality problems, such as fish kills and drinking water contamination. Stormwater runoff is typically discharged directly to receiving waters, and is not treated somewhere else, like at a wastewater treatment plant.
- Potential stormwater pollutants should be kept inside or under cover whenever possible.
- The best way to prevent stormwater problems is through general good housekeeping practices. A clean and organized facility will usually have very few stormwater problems.
- If anyone sees any potential stormwater problems, they should report it to the facility operator or a member of the stormwater pollution prevention team.

Tetra Tech

Figure 12. In addition to employee training, labeling storm drains is a good measure to educate employees.

4.J Non-Stormwater Discharges

In Section 3.A, this guide discussed the assessment of allowable and prohibited non-stormwater discharges at your site. As stated in that section, unauthorized non-stormwater discharges cannot be discharged from your facility unless specifically authorized by a separate, individual NPDES permit. Your SWPPP should describe the assessment you conducted under Section 3.A, how you eliminated any unauthorized non-stormwater discharges, and your plans to prevent unauthorized non-stormwater discharges at your facility.

Tetra Tech

Figure 13. Unauthorized non-stormwater discharge from an industrial facility.

What to Include in Your SWPPP

Include the following:

- A list of allowable non-stormwater discharges that occur at your facility.
- A description of unauthorized non-stormwater discharges found at your site and how they were eliminated.
- Steps taken to ensure that other unauthorized non-stormwater discharges do not occur in the future.

Note: If this section is already addressed by your documentation of non-stormwater discharges (see Section 3.A), you can simply include a cross-reference to that section of your SWPPP.

4.K Waste, Garbage, and Floatable Debris

You are responsible for making sure that stormwater runoff does not carry waste, garbage, and floatable debris to receiving waters. To verify compliance with this requirement, you should identify and implement control measures (e.g., good housekeeping, sweeping, keeping lids closed on dumpsters) to keep exposed areas free of such materials. Alternatively, your SWPPP should identify how you will intercept and properly dispose of these materials before they leave your facility.

What to Include in Your SWPPP

Include the following:

- A description of controls and procedures that will be used to minimize discharges of waste, garbage, and floatable debris.
- Descriptions of the location of these control measures and procedures at your site.

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Figure 14. Poor management of waste and garbage at a facility.

4.L Dust Generation and Vehicle Tracking of Industrial Materials

As an operator, you are responsible for minimizing generation of dust and off-site tracking of raw, final or waste materials. Dust control practices can reduce the activities and air movement that cause dust to be generated from disturbed soil surfaces. Airborne particles pose a dual threat to the environment and human health. Dust can be carried offsite, thereby increasing soil loss from disturbed areas and increasing the likelihood of sedimentation and water pollution. Control measures to minimize the generation of dust include:

- *Sprinkling/Irrigation*. Moistening the ground surface with water is an effective dust control method for haul roads and other traffic routes.
- *Vegetative Cover*. By establishing a vegetative cover on areas that will not see vehicle traffic, exposed soil is stabilized and wind velocity at ground level can be reduced, thus reducing the potential for dust to become airborne.
- *Mulch*. Mulch is a quick and effective, but not permanent, means of dust control for newly disturbed areas.
- *Wind Breaks*. Wind breaks can be trees or shrubs left in place during site clearing or constructed barriers such as a wind fence, snow fence, tarp curtain, hay bale, crate wall or sediment wall. The break reduces wind velocity, minimizing airborne transfer of soil off site.
- *Tillage*. Deep tillage in large open areas brings soil clods to the surface where they rest on top of dust, preventing it from becoming airborne.
- *Stone*. Stone can be an effective dust deterrent for construction roads and entrances or as a mulch in areas where vegetation cannot be established.
- *Spray-on Chemical Soil Treatments (Palliatives)*. Examples of chemical adhesives include anionic asphalt emulsion, latex emulsion, resin-water emulsions and calcium chloride. Chemical palliatives should be used only on mineral soils. When considering chemical application to suppress dust, determine whether the chemical is biodegradable or water-soluble and what effect its application could have on the surrounding environment, including waterbodies and wildlife.

To reduce vehicle tracking of materials and sediment, the operator should keep stored or spilled materials away from all roads within the site. Specific measures such as setting up a wash site or separate pad to clean vehicles prior to their leaving the site may be effective as well.

What to Include in Your SWPPP

Include the following:

- A description of controls and procedures used at your site to minimize the generation of dust.
- Descriptions of procedures and controls used to minimize off-site tracking of raw, final, or waste materials.
- Describe the location where each control and/or procedure will be implemented and include on the SWPPP site map.

4.M Numeric Effluent Limitations Based on Effluent Limit Guidelines

Some industrial activities identified in industrial stormwater permits also have Federal numeric effluent limits (called effluent limitation guidelines) that must be achieved in stormwater discharges. The effluent limits are maximum concentrations or levels of specific pollutants that can be discharged in facility stormwater. If your facility includes one of the industrial categories listed below, refer to your industrial stormwater general permit (Parts 6.2.2.1 and 2.1.3 of EPA's 2008 MSGP) regarding numeric effluent limits and monitoring requirements to which you are subject:

- Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas
- Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products
- Runoff from asphalt emulsion facilities
- Runoff from material storage piles at cement manufacturing facilities
- Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities
- Runoff from hazardous waste landfills

- Runoff from non-hazardous waste landfills
- Runoff from coal storage piles at steam electric generating facilities

An example of a numeric effluent limit is the requirement for facilities that discharge stormwater from asphalt emulsion facilities to meet specific, numeric concentration limits for TSS, pH, and oil and grease (i.e., based on the limits in 40 CFR Part 443, Subpart A).

If your facility is subject to numeric effluent limits, you must document the location and type of control measures installed at your site to meet those limits.

What to Include in Your SWPPP

Include the following:

- All numeric effluent limits the facility is required to meet based on effluent limit guidelines.
- A description of the control measures used to meet the numeric effluent limits.
- The location of each control measure at your site.

4.N Additional Controls to Address Impaired Waters

Many general permits have additional requirements for discharges to impaired waters. "Impaired waters" have been identified by a Tribe, State, or EPA as not meeting applicable State water quality standards pursuant to Section 303(d) of the Clean Water Act. This may include both waters with approved or established Total Maximum Daily Loads (TMDLs), and those for which a TMDL has not yet been approved or established.

SWPPP Tip!

Impaired waters are streams, rivers, and lakes that do not currently meet designated uses and water quality standards. States, territories, and authorized tribes are required under the Clean Water Act to compile lists of known impaired waters, called 303(d) lists. Stormwater discharges to impaired waters may trigger additional control measures and monitoring requirements. For facilities subject to EPA's 2008 MSGP, see Part 2.2 for a more detailed discussion of water quality-based effluent limitations and conditions for discharging to impaired waters.

A TMDL determines the greatest amount of a given pollutant, such as sediment, that a water body can receive without violating water quality standards and designated uses. The TMDL then establishes pollution reduction goals to bring the water body into compliance with water quality standards. Facilities that are subject to NPDES permits (i.e., "point sources"), such as facilities subject to EPA's 2008 MSGP, which discharge the pollutant causing the water body impairment, receive "waste load allocations" or "WLAs". The WLA estimates the daily amount of the impairment pollutant that can be discharged from particular sources or categories of sources so that the waterbody can be restored to meeting its applicable water quality standards.

Should your facility discharge stormwater to a water body subject to a TMDL, EPA or a State permit authority may require additional effluent limits, monitoring requirements, or other restrictions consistent with an applicable WLA, or you may be required to apply for an individual NPDES permit. Where you have been informed either in the permit or directly by EPA or a State permit authority that you are subject to any "water quality-based" discharge requirement consistent with an applicable WLA, you are required to document in your SWPPP the control measures used to meet that requirement and to describe the location of such control measures.

SWPPP Tip!

Find impaired waters near your facility – Use EPA's Water Locator Tool (available at **www.epa.gov/npdes/stormwater/msgp**) or other tool to map impaired waters within 10 miles of your facility. Enter your facility address in Step 1, then click on "Retrieve List of Impaired Waterbodies" under step 3 to see the list.

What to Include in Your SWPPP

Include the following:

- A description of the control measures used to meet the water quality-based effluent limits.
- The location of each control measure at your site.

Section 5: **Procedures for Inspections and Monitoring (Step 4)**

The next step in developing your SWPPP is to set out the procedures you will follow for inspecting your site and monitoring your stormwater discharge. The procedures you develop in your SWPPP for inspection and monitoring will help you understand whether your control measures are working and, if not, provide you with ways you may improve your stormwater control.

Industrial stormwater permits typically require three types of inspections:

1. Routine facility inspections (see Section 5.A)
2. Visual assessments (see Section 5.B)
3. Annual comprehensive site inspections (see Section 5.C)

Some States also require you to take samples of your stormwater discharge for laboratory analysis. Check the applicable section of your industrial stormwater permit to determine if you are required to collect water quality monitoring samples. See Section 5.D for guidance on how to address your monitoring procedures in the SWPPP.

The following sections describe the type of information you should document in your SWPPP and the associated decisions you will have to make when planning for and conducting each of the three types of inspections.

EPA's 2008 MSGP requires three types of facility inspections.

1. **Routine facility inspections (2008 MSGP, Part 4.1)**
2. **Quarterly visual assessment of stormwater discharges (2008 MSGP, Part 4.2)**
3. **Comprehensive site inspections (2008 MSGP, Part 4.3)**

The 2008 MSGP also includes the requirements for the following types of monitoring:

1. **Benchmark monitoring (2008 MSGP, Part 6.2.1)**
2. **Effluent guidelines limitation monitoring (2008 MSGP, Part 6.2.2)**
3. **State or Tribal monitoring (2008 MSGP, Part 6.2.3)**
4. **Impaired waters monitoring (2008 MSGP, Part 6.2.4)**

Monitoring procedures are described in Part 6.1 of the 2008 MSGP.

5.A Routine Facility Inspections

Your industrial stormwater permit will likely specify a *minimum* frequency for conducting routine facility inspections. The minimum frequency typically ranges from once per month to once per quarter; however, EPA recommends that you develop a routine inspection schedule customized for your facility and specific site conditions, which in many instances will require that you inspect more frequently than the minimum requirement. EPA also suggests conducting routine inspections when measurable precipitation falls during normal business hours. Observing site conditions during storms provides you with real-time feedback on control measures that are working and those that are not working effectively.

EPA's 2008 MSGP requires quarterly routine facility inspections of all areas where industrial materials or activities are exposed to stormwater, and of all stormwater control measures used to comply with the effluent limits contained in the permit. Inspections must be conducted by qualified personnel, including at least one member of your pollution prevention team, during regular business hours. You must specify the relevant inspection schedules in your SWPPP document as required in Part 5.1.5.

The 2008 MSGP requires that at least one of the four quarterly inspections each year be conducted when a stormwater discharge is occurring.

SWPPP Tip!

You should check your industrial stormwater general permit to determine if it establishes exceptions to the inspection requirements for certain types of sites. For example, 2008 MSGP Part 4.1.3 identifies exceptions to routine visual inspections for inactive or unstaffed sites.

Recommended Routine Facility Inspection Sequence

Although you are given the discretion to determine how best to conduct your inspection, EPA recommends that your inspection follow a sequence that corresponds to how raw materials arrive at your site and are stored or processed in areas exposed to stormwater, and to how intermediate or finished products are stored, processed, or transported from your facility. Accordingly, the following recommended inspection sequence will help ensure that you conduct a thorough routine inspection at your facility. Whichever process you determine is appropriate for your facility, you are required to describe that approach in your SWPPP.

SWPPP Tip!

Invest in an inexpensive digital camera to photo-document your inspections. Maintaining a photo history of inspections and control measures can help you to recognize if conditions changed or your control measures are degrading. Photographs can also help provide documentation to EPA or state inspectors that control measures are being maintained and replaced as needed.

1. Plan your inspection: Develop a consistent process to ensure that you inspect all areas. One method to ensure that your inspections are consistent and thorough is to create a checklist (or make notes on a copy of your SWPPP) of areas to inspect. Use as a resource your updated site map identifying the locations of industrial activities exposed to stormwater, stormwater conveyances and discharge points, and any BMPs.
2. Evaluate the area where raw materials are delivered. Are these areas contained or is there potential for stormwater to carry spills or pollutants away from the drop area? If so, can these pollutants leave your site to an adjoining facility, storm drain, or surface water? If so, additional control measures should be implemented.
3. Are raw materials stored in a contained area with overhead cover, berms, or other secondary containment? If not, do the raw materials have the potential to contribute to stormwater pollution?

   Note: Single-wall chemical containers need to be located within secondary containment structures, behind berms, or covered to prevent stormwater contamination from an accidental release of containerized chemicals. Similarly, solid materials with the potential to contain pollutants (i.e., scrap material or wrecked vehicles) should include secondary containment.
4. Is equipment maintenance and fueling conducted in appropriately contained areas? Are spill kits present and full in areas where a liquid spill could be expected?
5. Do the industrial processes occur in covered and contained areas?
6. Where do you store waste material?

   Note: If the waste material has the potential to contaminate stormwater it must be stored in a contained area or otherwise controlled. Be sure to evaluate the facility "bone-yard" and scrap all equipment that is out-of-date and not intended to be reused.

7. Is the finished product appropriately contained for potential pollutant sources?
8. Following the internal evaluation, walk the perimeter of your site and look for evidence of stormwater discharges—particularly stains from oil and grease or chemicals. Should you observe these, look at the discharge area and consider additional control measures. You should specifically observe all stormwater outfalls where stormwater leaves your facility.
9. Following each inspection, you will need to make note of control measures that require maintenance, or that need to be replaced, and make sure that the SWPPP and site map are current regarding industrial activities and potential pollutants.
10. Finally, where appropriate, repair or replace worn or ineffective control measures as soon as possible but certainly before the next forecasted precipitation event.

Tetra Tech

Figure 15. Example of a sheen indicating the presence of oil or other hydro carbons.

SWPPP Tip!

As you conduct your routine facility inspections, keep in mind these visual indicators of poor control measures or missing control measures:

1. Rainbow colored sheen on the surface of stormwater indicates the presence of oil or other hydrocarbons;
2. Brown or other dark colored streaks in flowing stormwater indicates soil erosion or uncontained sediment;
3. Stormwater flowing through straw waddles or other stormwater containment barriers;
4. Foam;
5. Trash and other debris being carried off-site by stormwater; and
6. Overflowing storm drains or detention ponds could be indicative of a clog or poor inlet design.

Routine Facility Inspection Reports

Your routine facility inspections will need to be recorded and documented. Generally, a standard inspection report is taken into the field and completed for each inspection. You should include in your SWPPP a copy of the standard inspection form you will use. An example routine facility inspection form can be found in the "Additional MSGP Documentation Template" on EPA's website at **www.epa.gov/npdes/pubs/msgp2008_recordkeepingtemplate.doc**.

SWPPP Tip!

Remember to update your SWPPP if you add, remove, or modify control measures following a routine visual, or other, inspection. Should you get inspected, EPA or the State agency will expect that all control measures identified in your SWPPP to be current and to be effectively implemented at your facility.

What to Include in Your SWPPP

Your SWPPP should describe the routine facility inspection process in enough detail that a member of your staff could complete an inspection by following the description in the SWPPP. The SWPPP description should include:

1. **Person(s) or positions of person(s) responsible for conducting the routine facility inspections**

   At least one member of your stormwater pollution prevention team should be involved in the routine facility inspections. Consider involving employees who regularly work in areas where stormwater may come into contact with industrial activity or materials.

2. **Schedules for conducting the routine facility inspections**

   Identify the minimum inspection frequency (e.g., monthly, quarterly) in your SWPPP. Consider scheduling the inspections for a set day every month or quarter, yet allow sufficient flexibility to be able to take advantage of a storm event, since many permits require that at least one inspection be conducted during a rain event.

3. **Routine facility inspection procedures**

   Describe how the routine facility inspection will be conducted, including which control measures or areas will be inspected and what the inspector will be looking for. Examples of things the inspector should be looking for include the condition of stormwater outfalls (trash accumulation, staining, evidence of unauthorized non-stormwater discharges, etc.); overall good housekeeping; and the condition of installed control measures (do any need to be maintained or replaced?).

   Among other procedures to describe, provide a description of the sequence you will follow during each inspection. One option is to use the recommended inspection sequence above or customize it to better suit your facility's layout.

4. **Reporting procedures**

   Describe your reporting procedures and include a blank copy of the inspection form that will be used during the routine inspections. Most industrial stormwater general permits require that inspection reports include the following:

   - The inspection date and time.
   - The name(s), title(s), and signature(s) of the inspector(s).
   - Weather information for the day of the inspection and, if appropriate, days or weeks prior to the inspection.
   - A description of any discharges observed.
   - A description of the visual quality of discharges (sheen, turbid, etc.).
   - Control measures in need of maintenance or repairs.
   - Control measures that need to be replaced.
   - Any incidents of noncompliance observed.
   - Additional control measures needed to comply with the permit requirements.

   Inspection reports also need to be signed by the inspector. Your inspection form should include a signature line for this.

5.B Visual Assessments

The second component of an effective stormwater inspection program is periodic visual assessments of the stormwater discharging from your facility. Visual assessments are conducted on samples taken during a storm event, and require that you make observations of the stormwater sample in order to qualitatively assess the nature of your discharge based on several visual parameters. This requires that you collect a stormwater sample in a clean, clear jar and look at the sample in a well lit area. Generally, a sample must be collected from each stormwater discharge location associated with industrial activity. The purpose of conducting visual assessments is to make sure that stormwater discharges are free from objectionable characteristics (i.e., pollutants you can see). Should you observe objectionable characteristics, you should backtrack upstream from the sample collection location to identify potential sources of the pollutants.

Some pollutants may be present in stormwater but cannot be seen; for this reason EPA or your State may require benchmark or effluent limit monitoring depending on the facility SIC code or industrial sector. See Section 5.D for more information on monitoring.

Most industrial stormwater permits do not require visual assessment samples to be collected consistent with 40 CFR Part 136 procedures (the Clean Water Act guidelines for

SWPPP Tip!

Check your industrial stormwater permit to determine if you are required to submit your visual assessment samples to a laboratory for analysis. The 2008 MSGP does not require samples to be submitted to a laboratory. However, if your permit does require you to submit samples for laboratory analysis, the samples must be collected and documented in accordance with 40 CFR Part 136 guidelines.

establishing test procedures for the analysis of pollutants); however, visual assessment samples should be collected in such a manner that the samples are representative of the stormwater discharge.

EPA's 2008 MSGP includes specific requirements for when and how to collect the visual assessment sample. You should look in your permit to determine what requirements apply to your facility's visual assessments. However, EPA believes its permit's requirements offer a clear and consistent way to conduct these assessments. They are summarized as follows:

- Collect stormwater samples within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, collect the sample as soon as possible after the first 30 minutes. In this case, be sure to document in your records (kept with your SWPPP) why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must only be taken during a period with a measurable discharge from your site.
- Collect the sample in a clean, clear glass, or plastic container.
- Examine the sample in a well-lit area or, if necessary, illuminate with a strong flashlight.
- Collect the samples from discharges that happen at least 72 hours (3 days) from the previous discharge event.

What to Include in Your SWPPP

Include in your SWPPP a description of your visual assessment process:

1. **Person(s) or positions of person(s) responsible for visual assessments.**
   Note: The visual assessment should be conducted by a member of your stormwater pollution prevention team.
2. **Schedules for conducting the visual assessments.**
   Note: Identify the minimum inspection frequency (typically quarterly) in your SWPPP. You should also describe procedures for determining when to conduct the visual assessments (e.g., within 30 minutes of an actual discharge, at least 3 days from previous discharge, etc.).
3. **Specific items to be covered by the assessment** (e.g., the 2008 MSGP requires permittees to visually inspect the sample in a well-lit area to assess the following water quality characteristics:
   - Color
   - Odor
   - Clarity
   - Floating solids
   - Settled solids
   - Suspended solids
   - Foam
   - Oil sheen
   - Other obvious indicators of stormwater pollution)
4. **The number and locations of outfalls scheduled for visual assessments.** List the outfalls where visual assessments will take place, and make sure these locations are identified on your site map.
5. **A description of safety considerations, requirements, and equipment for collecting samples during wet weather events.**
   Note: Sample must be collected in a clean, clear glass (required for oil and grease samples) or plastic container. Describe any other equipment necessary to collect the samples (such as sampling poles for hard to reach outfalls, rain gear, etc.). Describe any necessary safety considerations for staff while collecting the samples (for example, if they are sampling at an outfall discharging into receiving water with high flows, or sampling in a manhole).
6. **Reporting procedures:** Describe your reporting procedures and include a blank copy of the assessment form that will be used during the visual assessments. Most industrial stormwater general permits require that visual assessment reports include the following:
   - Sample location(s)
   - Sample collection date and time, and visual assessment date and time for each sample
   - The names of individuals, and titles or job positions, collecting the sample and performing visual assessment, and their signatures
   - Nature of the discharge (i.e., runoff or snowmelt)
   - Results of observations of the stormwater discharge
   - Probable sources of any observed stormwater contamination
   - If applicable, why it was not possible to collect samples within the first 30 minutes of discharge.

   The SWPPP should also contain a checklist or list of the water quality parameters that must be observed and documented.

Visual Assessment Documentation

Similar to the inspection reports for the routine facility inspections, you must document the results of your visual assessments in a written report. You should include a blank copy of your visual assessment report form that you will use in your SWPPP. An example of a visual assessment report can be found in the "Additional MSGP Documentation Template" on EPA's website at **www.epa.gov/npdes/pubs/msgp2008_recordkeepingtemplate.doc**.

Digital photos of the samples are recommended, but not required, to document the condition of the sample and future reference.

5.C Annual Comprehensive Site Inspections

Most industrial stormwater general permits require an annual comprehensive site inspection. The annual comprehensive site inspection is a more in-depth version of the routine facility inspection. The annual comprehensive site inspection evaluates the condition of control measures, taking into account trends observed in analytic and visual stormwater samples taken during the year, and found during routine inspections.

Check your general permit to determine if the comprehensive site inspection needs to be conducted at a certain time (e.g., by the end of the fiscal year). Some permits require you to submit your comprehensive site inspection findings to the State permit authority as part of your annual report, typically due shortly after the end of the fiscal year. EPA's 2008 MSGP requires that the annual report be submitted and postmarked within 45 days of completing the annual comprehensive site inspection.

The comprehensive site inspection must cover all areas of the facility affected by the requirements of your industrial stormwater general permit, including all potential stormwater pollutant sources identified in the SWPPP, areas where control measures are used to comply with applicable effluent limits, and areas where spills and leaks have been documented in the three years prior to the annual comprehensive site inspection. In addition, the annual inspection must, as appropriate, include a review of visual stormwater monitoring data collected each quarter of the previous year and the results of the routine site inspections.

SWPPP Tip!

EPA's 2008 MSGP requires you to conduct annual comprehensive site inspections once during each of the following inspection periods:

Year 1: September 29, 2008 – September 29, 2009
Year 2: September 29, 2009 – September 29, 2010
Year 3: September 29, 2010 – September 29, 2011
Year 4: September 29, 2011 – September 29, 2012
Year 5: September 29, 2012 – September 29, 2013

Comprehensive site inspections must be conducted by qualified personnel with at least one member of your stormwater pollution prevention team participating in the comprehensive site inspections.

The annual inspection should be preceded by evaluation of the year's visual stormwater sample observations, analytic monitoring data, and your routine site inspection findings. The overall review of the previous year's visual and analytic monitoring results will provide you with areas of focus for the annual inspection; however, the annual inspection must include all control measures included in the SWPPP, regardless of the results from the past visual assessments and site inspections. Inspecting all stormwater control measures is meant to ensure that they are functioning correctly, and, if not, to correct any deficiency or malfunction. Accordingly, at the end of the annual comprehensive inspection you, and your stormwater pollution prevention team, should be able to answer the following questions.

- Are the control measures in place, maintained, and operating effectively?
- Is the routine site inspection protocol effective and conducted at the appropriate frequency?
- If your previous visual samples been were indicated the presence of pollutants in your stormwater, and your analytic samples been found to have high levels of any benchmark pollutants or other pollutants of concern, do you suspect that any particular areas of your site are contributing to these monitoring results? Do you suspect that the improper functioning of any stormwater control measures is contributing to these monitoring results?
- Is the SWPPP up-to-date regarding all of the stated control measures and monitoring schedules?

Based on the answers to these questions, you may need to modify your stormwater management program and to update your SWPPP to address problems found during your inspection.

Comprehensive Site Inspection Documentation

The results, and documentation, of your annual site inspection must be maintained on-site and, depending on the requirements in your stormwater permit, submitted with your annual report. An example of a comprehensive site inspection report can be found in the "Additional MSGP Documentation Template" on EPA's website at **www.epa.gov/npdes/pubs/msgp2008_recordkeepingtemplate.doc**.

What to Include in Your SWPPP

Include in your SWPPP a description of the annual comprehensive site inspection process:

1. **Person(s) or positions of person(s) responsible for inspection**
   Note: Include at least one member of the stormwater pollution prevention team.
2. **Schedules for conducting the inspections**
   Note: Describe when during the year the annual inspection will take place.
3. **Describe the list of documents to be reviewed prior to the annual site inspection.** This list will typically include:
   - The current SWPPP
   - All routine inspection reports for the past year
   - All visual assessment reports for the past year
   - Other documentation that may relate to how your facility complies with stormwater permit requirements, such as maintenance records, spill records, etc. for the past year.
4. **A copy of the current SWPPP site map**
   Note: A current copy of the site map can be used during the comprehensive site inspection to make sure the inspector is covering all required areas.
5. **Procedures for how the annual inspection will be conducted.** Describe how the annual inspection will be conducted, including which control measures or areas will be inspected and what the inspector will be looking for. Specific items to be covered by the inspection include:
   - Industrial materials, residue, or trash that may have or could come into contact with stormwater;
   - Leaks or spills from industrial equipment, drums, tanks, and other containers;
   - Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
   - Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and
   - Control measures needing replacement, maintenance, or repair.
6. **A copy of the annual site inspection form you will use.**
   Note: EPA's 2008 MSGP has a comprehensive site inspection form in Appendix I of EPA's 2008 MSGP. Your annual site inspection form should contain:
   - The date of the inspection;
   - The name(s) and title(s) of the personnel making the inspection;
   - Findings from the areas of your facility that were examined;
   - All observations relating to the implementation of your control measures including:
     - Previously unidentified discharges from the site,
     - Previously unidentified pollutants in existing discharges,
     - Evidence of, or the potential for, pollutants entering the drainage system;
     - Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring, and
     - Additional control measures needed to address any conditions requiring corrective action identified during the inspection.
   - Any required revisions to the SWPPP resulting from the inspection;
   - Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance); and
   - A statement, signed and certified in accordance with Appendix B, Subsection 11 of EPA's 2008 MSGP.
7. **A schedule for completing and submitting (if required) the annual site inspection form/report in a timely manner.**

5.D Documentation of Monitoring Procedures

Your industrial stormwater general permit may include requirements to conduct stormwater discharge monitoring. The type of monitoring you are required to conduct will likely be based on your type of industrial activity. Not all types of industrial activity will be required to collect stormwater discharge samples, however, if your facility is required to conduct monitoring (such as benchmark monitoring or effluent limitation guideline monitoring), you must describe the procedures you will use to carry out this monitoring in your SWPPP.

EPA has prepared an *Industrial Stormwater Monitoring and Sampling Guide* (available at **www.epa.gov/npdes/stormwater/msgp**) that will support this guide. The *Industrial Stormwater Monitoring and Sampling Guide* provides a more detailed description of monitoring approaches and procedures that are recommended than is included in this guide.

As a general matter, your stormwater discharge samples will be taken at your facility's stormwater outfall locations, not at locations within your facility. Some stormwater general permits allow you to sample at only one outfall when multiple outfalls at your facility have similar industrial activities, control measures, exposed materials, and runoff coefficients. Outfalls that have these similar characteristics are called "substantially identical outfalls" or "representative outfalls." See your industrial stormwater general permit for more information.

What to Include in Your SWPPP

Include in your SWPPP, a description of the following monitoring requirements:

1. **What you need to monitor**

   Make sure your SWPPP clearly identifies the parameters you need to monitor, and any applicable benchmark concentrations or effluent limits associated with each parameter.

2. **Where you need to monitor**

   Your site map should identify the outfalls at your facility. In your SWPPP, identify at which outfalls you will be required to monitor. If you are allowed to sample one of the outfalls that are "substantially identical", and you plan on using a representative outfall, include the following documentation in your SWPPP:

   - Location of each substantially identical outfall;
   - Description of the general industrial activities conducted in the drainage area of each substantially identical outfall;
   - Description of the control measures implemented in the drainage area of each substantially identical outfall;
   - Description of the exposed materials located in the drainage area of each substantially identical outfall that are likely to be significant contributors of pollutants to stormwater discharges;
   - An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and
   - Why the outfalls are expected to discharge substantially identical effluents.

3. **When you need to monitor**

   If you are required to monitor, your industrial stormwater general permit will specify a monitoring frequency (typically quarterly or annually). For each of the parameters you identified above, include in your SWPPP the monitoring frequency. Some permits also specify exemptions or alternative monitoring periods, which should also be addressed in your SWPPP.

   Your SWPPP should also describe the type of storm event that should be monitored. In the 2008 MSGP, EPA requires monitoring during a storm event those results in an actual discharge from your site ("measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days).

4. **How you will conduct the monitoring**

   Describe in your SWPPP how you will conduct the monitoring, including who will collect the samples. Typically, monitoring is conducted by taking one grab sample from a discharge resulting from a measurable storm event and collected within the first 30 minutes of a measurable storm event, during normal business hours, when stormwater is discharging from your facility.

   Also describe any sample documentation and preservation procedures you plan to use. Some samples may need to be analyzed within a short time, or may need to be preserved with blue ice before being analyzed.

5. **Where you will send the sample for analysis**

   Finally, in your SWPPP, include information about the laboratory where you will send the samples for analysis. Include information such as lab name and address, any sampling procedures required by the lab, and who will take the samples to the lab.

Section 6: **Completing Your SWPPP**

Now that you have conducted a site assessment of your facility, developed maps, selected control measures, and developed procedures for inspections and monitoring. You are almost done with your SWPPP! The last step is to make sure all this information is organized into a single document (your SWPPP) and to obtain NPDES permit coverage.

6.A Finish your SWPPP

The information you put together as part of Sections 3 through 5 make up the contents of your SWPPP. There are only two more steps for you to finish before your SWPPP is complete:

- Conduct a final review of your SWPPP; and
- Sign and certify your SWPPP

Review Your Draft SWPPP

You should review the SWPPP requirements in your industrial stormwater general permit to ensure that your SWPPP includes all required elements. For example, in the 2008 MSGP, the SWPPP requirements are in Part 5. Check off all the SWPPP permit requirements as you verify that they have been met. Also, develop a final copy of your site map and make sure that all required elements are addressed.

EPA recommends that you have both your stormwater pollution prevention team, and someone who was not involved in developing the SWPPP, review your draft SWPPP.

Sign and Certify Your SWPPP

The last step in completing your SWPPP is to have a facility executive or duly authorized representative of that executive sign and certify that the SWPPP meets all the requirements in the general permit. This signature demonstrates that the SWPPP was reviewed by someone who has operational control over the facility (i.e., can commit resources to implementing the SWPPP and ensuring compliance with the permit). You should check your general permit to determine which person is required to sign and certify the SWPPP. Note that the signatory requirements for the 2008 MSGP are found in Appendix B, Subsection 11 of EPA's 2008 MSGP.

6.B Obtain NPDES Permit Coverage

Important! Before obtaining permit coverage, you should read the appropriate industrial stormwater permit and develop your SWPPP.

Most permits require that you develop your SWPPP before you can obtain NPDES permit coverage for your industrial stormwater discharges. However, in some instances, the permit may provide you with additional time to complete or update a SWPPP after permit coverage is obtained. Nevertheless, it is recommended that your SWPPP be completed at least in draft form prior to applying for permit coverage, even in those States where additional time is granted.

Obtaining Coverage Under a General Permit

To obtain coverage under a State industrial stormwater general permit, you will typically need to fill out and submit an application form, often called a Notice of Intent or

NOI. Submitting an NOI form to the permitting authority indicates your certification that you have met the eligibility requirements for coverage under the permit, and your agreement to abide by the terms and conditions of the general permit. Depending on the permit, you may be authorized to discharge immediately or at some later time. In some cases, you are not authorized to discharge until the State has notified you accordingly. EPA's 2008 MSGP (see Part 1.3.1) uses a 30 to 60-day waiting period following the receipt of a facility's complete NOI. The waiting period expires when the permit's status changes from "waiting" to "active" on the Agency's eNOI website.

Read the application requirements in your general permit for information on the procedures and the specific form you will need to complete before becoming authorized. Some States charge an administrative fee to apply for permit coverage. Before submitting your application, you must also make sure that you meet all eligibility requirements in the permit. For example, if your facility discharges to one of several highly protected waters (e.g., a Tier 3 or "Outstanding Natural Resource Water"), you may not be eligible for coverage under a general permit and instead may have to file an application for individual permit coverage.

SWPPP Tip!

Documentation to Support Eligibility Considerations Under Other Federal Laws

The 2008 MSGP requires that you keep with your SWPPP the documentation supporting your eligibility pertaining to endangered species requirements, historic properties requirements, and NEPA review requirements described in the permit (see Part 5.1.6 of the permit). State industrial stormwater permits may have other documentation requirements.

6.C Updating Your SWPPP

Your SWPPP is a document that will need to be reviewed and updated on a regular basis. Whenever you find the need to change a procedure that is described in your SWPPP or to modify a control measure described therein, you must update the SWPPP to reflect those changes as quickly as practicable. Should the SWPPP require modification to document corrective actions, a new certification statement must be signed and dated upon completion of the revision.

Below are some examples of events that, if they result in a change in control measures or procedures, will require prompt revision of the SWPPP to reflect the new facility conditions.

- A change in the composition of the stormwater pollution prevention team or new responsible official.
- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility.
- A discharge violates a numeric effluent limit.
- You become aware, or EPA determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of your facility by an EPA official, or local, State, or Tribal entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit.
- Construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged.
- The average of four quarterly sampling results exceeds an applicable benchmark. If less than four benchmark samples have been taken, but the results are such that an exceedance of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedance, triggering a review of control measures and possible SWPPP modification.

Remember, revisions to the SWPPP to document corrective actions requires a new signed and dated certification statement by the responsible official. All other changes must be signed and dated by the person preparing the change.

SWPPP Tip!

In the interim between the annual inspection and completed SWPPP revision, keep a copy of the original SWPPP with your handwritten notes for SWPPP modifications at the facility. Should you be inspected before the revised SWPPP is complete, the copy with your notes can be used to demonstrate the changes that will be in the revised document.

Section 7: **Keeping Records of Your Implementation Activities**

Completing your SWPPP and obtaining NPDES permit coverage is an important step towards complying with your State or EPA Clean Water Act requirements. Having completed these steps, you are now ready to begin documenting your compliance with the requirements of your permit. EPA's 2008 MSGP and many State permits require you to keep records of any activities at your site that are related to your compliance, such as conducting inspections, visual assessments, stormwater discharge monitoring, and corrective actions.

As you conduct inspections, monitoring, corrective actions, and other permit implementation activities, you will generate additional records, such as inspection reports and monitoring results. Keep this additional documentation on-site with your SWPPP, and ensure these records are accessible, complete, and up-to-date so that they demonstrate your full compliance with the conditions of your permit.

Some examples of this additional documentation include:

- *Permit records* – copies of the NOI or permit application submitted, any letters received from the permitting authority, and a copy of your general permit.
- *Spill records* – dates of any incidences of significant spills, leaks, or other releases that resulted in a discharge of pollutants, the circumstances leading to the release, actions taken in response to the release, and measures taken to prevent the recurrence of a release.
- *Employee training records* – keep copies of all employee training records, including dates, who was trained, and the training topics.
- *Maintenance records* – retain copies of all maintenance and repairs of control measures, including dates of regular maintenance, dates when maintenance needs were discovered, and dates when control measures were returned to full function.
- *Inspection records* – keep copies of all routine facility inspection reports, quarterly visual assessment reports, and annual comprehensive site inspection reports.
- *Monitoring records* – retain records of all sampling results including data collection forms, lab results, and discharge monitoring reports (DMRs).
- *Corrective action records* – keep records of any corrective actions and follow-up activities conducted to demonstrate compliance with the permit.

SWPPP Tip!

For 2008 MSGP permit holders, the list of additional documentation requirements can be found in Part 5.4 of the permit. Also, EPA has developed an "Additional MSGP Documentation Template" with sample forms that you can download from **www.epa.gov/npdes/stormwater/msgp** to help you organize this information.

Section 8: **Common Compliance Problems at Industrial Facilities**

The following are common problems found during inspections of industrial sites conducted by EPA. These are provided to assist you in developing and maintaining an effective SWPPP. As a general matter, it is not enough to simply have a completed SWPPP at your site. To establish compliance with your permit's limits and conditions, you must also implement the procedures, and install and maintain the control measures, described in your SWPPP, and make modifications as necessary to improve your performance.

You should review these common compliance problems and consider how your SWPPP, or how your implementation of the procedures described in your SWPPP, can be modified to ensure you are not making the same mistakes.

1. **No SWPPP developed.** Some facilities do not realize that they need to develop a SWPPP, or they may copy a generic SWPPP or a SWPPP for another facility. A SWPPP is a site-specific plan and should address only your facility.
2. **Control measures described in SWPPP not used.** The SWPPP identifies stormwater control measures that are not actually being used at the site. The stormwater regulations hold you responsible for effectively implementing all control measures identified in your SWPPP. If your SWPPP has identified control measures not being used at your site, you need to edit your SWPPP accordingly to accurately reflect those measures you are in fact using.
3. **No SWPPP on-site.** A copy of the SWPPP is not available on-site for review when a permitting authority or other regulatory agency inspects your site. You are responsible for maintaining a copy on-site at all times. If your SWPPP is being updated off-site, keep a marked-up copy on-site or an electronic copy until the revised SWPPP arrives.

Tetra Tech

Figure 16. Good housekeeping is probably the most common BMP in SWPPPs. Poor sweeping practices can contribute significant pollutants in stormwater runoff.

4. **SWPPP not signed.** The responsible facility representative did not sign and authorize the current version of the SWPPP.
5. **Stormwater pollution prevention team not up-to-date.** The stormwater pollution prevention team identified in the SWPPP is not current. This is particularly a problem at facilities with high turnover. Remember, you can identify team members by title rather than by name if high turnover makes it difficult to keep a current list of names.
6. **On-site staff not familiar with SWPPP.** Upon arrival of an inspector, no one familiar with the stormwater program is available. A common permit requirement is that at least one employee per shift is familiar with the stormwater program and has access to the relevant files.

Tetra Tech

Figure 17. Leaking dumpsters can introduce pollutants into stormwater runoff.

SWPPP Tip!

SWPPP Availability – Keep a copy of the current, signed and certified SWPPP at your facility, and make it available to EPA, State, local agency or other regulatory agency staff at the time of an onsite inspection or upon request. The SWPPP should also be made easily available to facility staff, and should be readily referred to during regular facility operations to ensure that all activities are implemented as described in the SWPPP.

7. **Improper collection of visual assessment samples.** Visual stormwater samples are collected from pooled areas on site. Pooled areas tend to concentrate pollutants and are not representative, unless the contents of the pooled areas flow off of the facility (this is to your disadvantage).
8. **Uncovered dumpsters.** Dumpsters that receive metal waste are not covered or contained. Dumpsters from contract waste collection agencies are often not appropriately sealed and can leak oils or other contaminants.
9. **Poor employee/contract staff training.** Employees or contract staff are not familiar with your stormwater management program. You are responsible for educating employees and contractors because if they release pollutants at your facility, you are responsible. If you use contractors, they should be referred to in your SWPPP and required to be trained as a part of the contract.
10. **Inspection or monitoring records are not kept with the SWPPP.** Records of routine site inspections, visual assessments, or monitoring results are not available with the SWPPP for review. All records on implementation of practices required in the permit must be kept with the SWPPP (see Section 6.C for more information).

Resources

EPA, 2008 Multi-Sector General Permit, issued September 29, 2008 (available at **www.epa.gov/npdes/stormwater/msgp**).

EPA's Stormwater Website – **www.epa.gov/npdes/stormwater**

Industrial Stormwater Resource Locator – **www.envcap.org/iswrl/**

EPA's Industrial Stormwater Website – **www.epa.gov/npdes/stormwater/indust**

EPA's 2008 MSGP Website – **www.epa.gov/npdes/stormwater/msgp**

The Industrial Stormwater and MSGP Websites have a number of resources and tools to aid MSGP permittees, which include:

- *Annual Reporting Form* – Permittees can use this form to report their annual comprehensive site inspection and corrective actions to EPA.
- *Conditional "No Exposure" Exclusion* – Industrial facilities can use this form to certify that their industrial materials and operations are not exposed to stormwater.
- *Developing your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators* – Provides guidance on how to develop a SWPPP that meets the requirements of the 2008 MSGP.
- *Electronic Notice of Intent (eNOI) System* – Allows permittees to quickly apply for permit coverage under EPA's 2008 MSGP.
- *Industrial Stormwater Monitoring and Sampling Guide* – Provides guidance on how to meet the monitoring and sampling requirements in the 2008 MSGP.
- *Industrial Sector Fact Sheets* – These fact sheets summarize the types of facilities included that sector, the pollutants associated with this sector, and the types of stormwater control measures generally used.
- *List of Tier 2 and Tier 3 Waters* – Lists of waters currently designated by states as Tier 2 or Tier 3 for antidegradation purposes to help you complete your NOI.
- *MSGP Discharge Monitoring Report (MDMR)* – Permittees can use this paper copy form to submit monitoring data to EPA.
- *Reporting MSGP Monitoring Data* – Allows permittees to electronically file all benchmark, effluent limitation guidelines, and impaired waters monitoring data through the eNOI system.
- *Sample MSGP SWPPP Template* – Industrial facilities can use the "Industrial SWPPP Template" to create their own SWPPPs.
- *Sample Recordkeeping Templates* – Use the sample templates and forms to keep records of your monitoring, inspection, maintenance, visual evaluation, and corrective action activities.
- *Search, Sort, and View Industrial NOIs* – Searchable database of stormwater notices of intent (NOIs) for industrial facilities seeking coverage under EPA's MSGP.
- *Water Locator Tool* – Helps industrial facilities pinpoint their site's latitude and longitude, receiving water, and impairment status of the water, applicable total maximum daily loads (TMDLs), and potential pollutants of concern.

EPA's NPDES Authorization Status Website – **www.epa.gov/npdes/stormwater/authorizationstatus**

EPA's Menu of National Stormwater BMPs – **www.epa.gov/npdes/stormwater/menuofbmps**

Industrial Stormwater Permit Guide – **www.pneac.org/stormwater/**

Appendix A: **MSGP SWPPP Template**

EPA has created a template to assist operators in developing an industrial SWPPP that addresses the requirements in the 2008 MSGP. The template includes instructions and space to help operators document activities specific to their facility, such as:

- Facility Description and Contact Information
- Potential Pollutant Sources
- Stormwater Control Measures
- Schedules and Procedures for Monitoring
- Inspections
- Documentation to Support Eligibility Considerations under Other Federal Laws
- SWPPP Certification
- SWPPP Modifications
- SWPPP Attachments

A customizable Microsoft Word version of the MSGP SWPPP Template is available for download from **www.epa.gov/npdes/stormwater/msgp**.

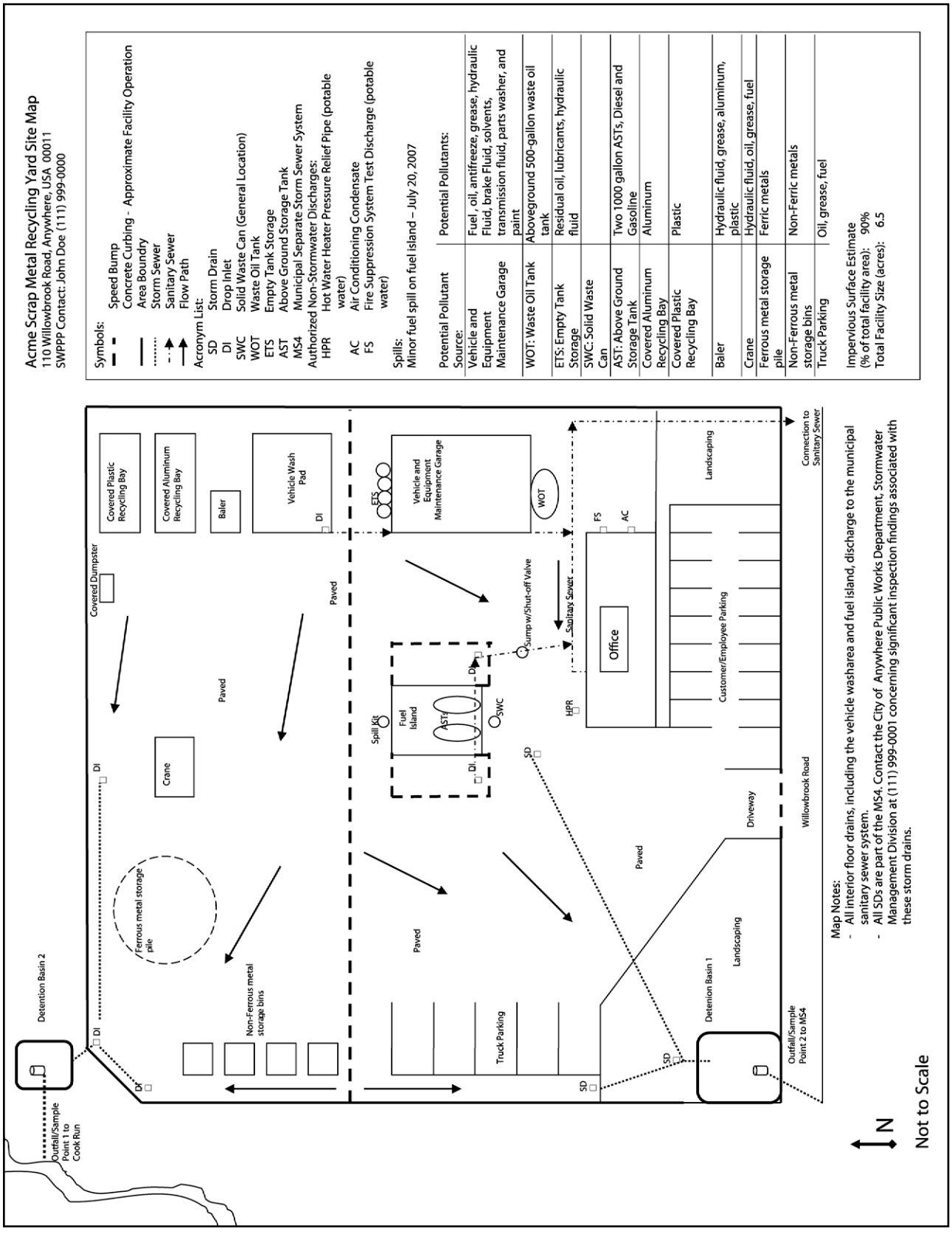
Appendix B: **Additional MSGP Documentation Template**

EPA has created a template to assist 2008 MSGP permit holders in collecting the additional documentation required during implementation of the permit. The Additional MSGP Documentation Template includes example forms and tables to help permittees document activities related to:

- Significant spills, leaks or other releases
- Employee training
- Maintenance
- Routine Facility Inspection Reports
- Quarterly Visual Assessment Reports
- Comprehensive Site Inspection Reports
- Monitoring results
- Deviations from assessment or monitoring schedule
- Benchmark Exceedances
- Impaired Waters Monitoring: Documentation of Natural Background Sources or Non-Presence of Impairment Pollutant
- Active/Inactive status change
- SWPPP Amendment Log

The Additional MSGP Documentation template can be downloaded in Microsoft Word format at **www.epa.gov/npdes/stormwater/msgp**.

Appendix C: **Example Site Map**



APPENDIX I

MDNR Sector Factsheet/Guide

Industrial Stormwater

Fact Sheet Series

Sector D: Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers

U.S. EPA Office of Water
EPA-833-F-06-019
December 2006

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet discusses stormwater discharges from asphalt paving and roofing materials manufacturers and lubricant manufacturers as described by Standard Industrial Classification (SIC) Major Group 29. Only facilities that perform the following operations require coverage under an industrial stormwater permit:

- Asphalt paving mixtures and blocks (SIC 2951)
- Asphalt felts and coatings (SIC 2952)
- Lubricating oils and lubricating oils and greases (SIC 2992)
- Products of petroleum and coal not elsewhere classified (SIC 2999)

Not discussed in this fact sheet are renderers of fats and oils (see Fact Sheet U (EPA-833-F-06-036) for food and kindred products), oil recycling facilities (see Fact Sheet N (EPA-833-F-06-029) for scrap recycling facilities), or petroleum refining facilities.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to **www.epa.gov/npdes/stormwater** and click on "Industrial Activity."

What pollutants are associated with activities at my facility?

Pollutants conveyed in stormwater discharges from facilities involved with the manufacturing of asphalt, roofing materials, and lubricants will vary. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Topography
- Hydrogeology
- Extent of impervious surfaces (e.g., concrete or asphalt)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at asphalt paving and roofing materials manufacturers and lubricant manufacturing facilities.

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturing Facilities

Activity	Pollutant Source	Pollutant
Asphalt Paving and Roofing Materials		
Outdoor stockpiling of materials	Exposure of aggregate (sand, stone, limestone, gravel, etc.) to precipitation	Total suspended solids (TSS), total dissolved solids (TDS) biochemical oxygen demand (BOD5), chemical oxygen demand (COD), oil and grease (O&G), benzene, methylene blue active substances (MBAS), metals, pH
Storage of materials in above-ground tanks	Leakage from tanks	TSS, TDS, BOD5, COD, O&G, benzene, MBAS, metals, pH
Transport of materials by a conveyor or front-end loader	Exposed materials and potential spills	TSS, TDS, BOD5, COD, O&G, benzene, MBAS, metals, pH
Lubricating Oils and Greases		
Storage of raw materials	Spills and leaks of materials from tank farms or 55-gallon drums	Petroleum or synthetic-based stocks and various additives, O&G, pH
Vehicle and equipment maintenance	Parts cleaning, waste disposal of rags, oil filters, air filters, batteries, hydraulic fluids, transmission fluids, brake fluids, coolants, lubricants, degreasers, spent solvents	Gas/diesel fuel, fuel additives, oil/lubricants, heavy metals, brake fluids, transmission fluids, chlorinated solvents, arsenic
Vehicle and equipment fueling	Spills and leaks during fuel transfer, spills due to "topping off" tanks, runoff from fueling areas, washdown of fueling areas, leaking storage tanks, spills of oils, brake fluids, transmission fluids,	Gas/diesel fuel, fuel additives, oil, lubricants, heavy metals

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from asphalt paving and roofing materials manufacturers and lubricant manufacturing facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs,

which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at asphalt paving and roofing materials manufacturers and lubricant manufacturing facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to asphalt paving and roofing materials manufacturers and lubricant manufacturing facilities; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources at Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturing Facilities

Pollutant Source	BMPs
Material storage, handling, and processing	❑ Cover material storage and handling areas with an awning, tarp, or roof. ❑ Confine storage to designated and labeled areas outside of drainage pathways and away from surface waters ❑ Practice good stockpiling practices such as: storing materials on concrete or asphalt pads; surrounding stockpiles with diversion dikes or curbs; and revegetating areas used for stockpiling in order to slow runoff. ❑ Use curbing, diking, or channelization around material storage, handling and processing areas to divert run-on around areas where it can come into contact with material stored or spilled on the ground. ❑ Utilize secondary containment measures such as dikes or berms around asphalt storage tanks and fuel oil tanks. ❑ Use dust collection systems (i.e., baghouses) to collect airborne particles generated as a result of material handling operations or aggregate drying. ❑ Promptly dispose of waste materials from dust collection systems and other operations. ❑ Remove spilled material and dust from paved portions of the facility by shoveling and sweeping on a regular basis. ❑ Utilize catch basins to collect potentially contaminated stormwater. ❑ Develop and implement spill prevention plans to prevent contact of runoff with spills of significant materials. ❑ Clean material handling equipment and vehicles to remove accumulated dust and residue on a regular basis. ❑ Use a detention pond or sedimentation basin to reduce suspended solids. ❑ Use an oil/water separator to reduce the discharge of oil/grease. ❑ Maintain up-to-date material inventory. ❑ Maintain dry, clean floors and ground surfaces. ❑ Train employees in good housekeeping, spill prevention and control, and materials management procedures.

Table 2. BMPs for Potential Pollutant Sources at Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturing Facilities (continued)

Pollutant Source	BMPs
Storage of Petroleum, synthetic-based stocks and additives	❑ If area is uncovered, connect sump outlet to sanitary sewer (if possible) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place. ❑ Develop and implement spill plans. ❑ Train employees in spill prevention and control. Above ground tanks ❑ Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. ❑ Use double-walled tanks with overflow protection. ❑ Keep liquid transfer nozzles/hoses in secondary containment area. Portable containers/drums ❑ Keep liquid transfer nozzles/hoses in secondary containment area. ❑ Store drums indoors when possible. ❑ Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). ❑ Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). ❑ Clearly label drum with its contents.
Vehicle and equipment fueling	❑ Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. ❑ When fueling in uncovered area, use a concrete pad (asphalt is not chemically resistant to the fuels being handled). ❑ Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Use spill and overflow protection devices. ❑ Keep spill cleanup material readily available. Clean up spills and leaks immediately. ❑ Minimize/eliminate run-on into fueling areas with diversion dikes, berms, containment trenches, curbing or other equivalent measures. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Use dry cleanup methods for fuel area rather than hosing down the fuel area. Follow procedures for sweeping up absorbents as soon as spilled substances have been absorbed. ❑ Provide curbing or posts around fuel pumps to prevent collisions from vehicles. ❑ Discourage "topping off" of fuel tanks. ❑ Regularly inspect and perform preventive maintenance on fuel storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area for leaks and spills. ❑ Train employees on vehicle fueling BMPs.

Table 2. BMPs for Potential Pollutant Sources at Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturing Facilities (continued)

Pollutant Source	BMPs
Vehicle and equipment maintenance	Good Housekeeping ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste hauler. ❑ Do all cleaning at a centralized station so the solvents stay in one area. ❑ If parts are dipped in liquid, remove them slowly to avoid spills. ❑ Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. ❑ Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. ❑ Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. ❑ Do not pour liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Store batteries and other significant materials indoors. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations. Minimizing Exposure ❑ Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on concrete pad that is impervious and contained. ❑ Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. ❑ Check vehicles closely for leaks and use pans to collect fluid when leaks occur. Management of Runoff ❑ Use berms, curbs, grassed swales or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and provide treatment or recycling. Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle onsite. DO NOT discharge washwater to a storm drain or to surface water. Inspections and Training ❑ Inspect the maintenance area regularly to ensure BMPs are implemented. ❑ Train employees on proper waste control and disposal procedures.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see **www.epa.gov/npdes/stormwater/msgp**.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at **www.epa.gov/npdes/stormwatercontacts**.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

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  www.epa.gov/npdes/stormwater/msgp

Appendix J

Comprehensive Pollutant Source and BMP Guide

Table 3.2 Comprehensive Possible Pollutant Source and BMP Guide

Pollutant Source	BMPs
Metal Fabricating Areas	Sweep fabrication areas frequently to avoid heavy accumulation of steel ingots, fines, and scrap.
	Absorb dust through a vacuum system to avoid accumulation on roof tops and onto the ground.
	Sweep all accessible paved areas on a regular basis.
	Maintain floors in a clean and dry condition using dry cleanup techniques.
	Remove waste and dispose of regularly.
	Train employees on good housekeeping measures.
Raw Material Storage Areas	Store materials in a covered area whenever possible.
	Organize storage areas so there is easy access in case of a spill.
	Label stored materials to aid in identifying spill contents.
	Minimize the amount of material stored to avoid corrosive activity from long-term exposed materials.
	Dike or berm the area to prevent or minimize run-on.
	Keep area neat and orderly; stack neatly on pallets or off the ground.
	Cover exposed materials.
Receiving, Unloading, & Loading Areas	Conine loading/unloading activities to designated areas outside drainage pathways and away from surface waters.
	Close storm drains during loading/unloading activities in surrounding areas.
	Use a dead-end sump where materials could be directed.
	Inspect containers for leaks or damage prior to loading/unloading.
	Avoid loading/unloading materials in the rain or provide cover or other protection for loading docks.
	Provide diversion berms, dikes or grassed swales around the perimeter of the area to limit run-on.
	Cover loading and unloading areas and perform these activities on an impervious pad to enable easy collection of spilled materials.
	Slope the impervious concrete floor or pad to collect spills and leaks and convey them to proper containment and treatment.
	Provide overhangs or door skirts to enclose trailer ends at truck loading/unloading docks.
	For rail transfer, a drip pan shall be installed within the rails to collect spillage from the tank.
	Where liquid or powdered materials are transferred in bulk to/from truck or rail cars, ensure hose connection points at storage containers are inside containment areas, or drip pans are used in areas where spillage may occur which are not in a containment area.
	Enclose material handling systems.
	Cover materials entering and leaving areas.
	Use dry cleanup methods instead of washing the areas down.
	Regularly sweep area to minimize debris on the ground.
	Provide dust control if necessary. When controlling dust, sweep and/or apply water or materials that will not impact surface or ground water.
	Develop and implement spill prevention, containment, and countermeasure (SPCC) plans.
	Train employees in spill prevention, control, cleanup, and proper materials management techniques.

Pollutant Source	BMPs
Heavy Equipment Storage Areas	Vehicles should be stored indoors when possible.
	Provide covering for outdoor storage areas.
	Divert drainage to the grass swales, filter strips, retention ponds, or holding tanks.
	Direct drainage systems away from high traffic areas into collection systems.
	Clean equipment prior to storage.
Metal Working Fluid Areas	Store used metal working fluid with fine metal dust indoors.
	Use tight sealing lids on all fluid containers.
	Use straw, clay absorbents, sawdust, or synthetic absorbents to conine or contain any spills.
	Establish recycling programs for used fluids when possible.
	Conduct daily inspections of each machine to identify problems and trends and reduce fluid waste.
	Use pumps, spigots, and funnels when transferring metal working fluid to reduce the amount of lost fluid and the risk of spilling fluids
	Fix leaking seals and gadgets to prevent leaks.
Unprotected Liquid Storage Tanks	If area is uncovered, connect sump outlet to sanitary sewer (if possible) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place.
	Develop and implement spill plans.
	Train employees in spill prevention and control.
Above Ground Tanks	Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank).
	If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge.
	Use double-walled tanks.
	Keep liquid transfer nozzles/hoses in secondary containment area.
	Include overflow protection.
Portable containers/drums	Store drums indoors when possible.
	Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation).
	Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank).
	Clearly label drum with its contents.
Chemical cleaners and rinse water	Use drip pans and other spill devices to collect spills or solvents and other liquid cleaners.
	Recycle wastewater.
	Store recyclable waste indoors or in covered containers.
	Substitute nontoxic cleaning agents when possible.
Raw Steel Collection Areas	Keep collection areas clean.
	Keep materials in a covered storage bin or inside until pickup.
	Collect scrap metals, fines, iron dust and store under cover and recycle.

Pollutant Source	BMPs
Paints and Painting Equipment	Paint and sand indoors when possible.
	If done outside, enclose sanding and painting areas with tarps or plastic sheeting.
	Avoid painting and sandblasting operations outdoors in windy weather conditions.
	Use tarps, drip pans, or other spill collection devices to contain and collect spills.
	Use effective spray equipment that delivers more paint to the target and less overspray.
	Mix paints and solvents in designated areas away from drains, ditches, piers, and surface waters, preferably indoors or under cover
	Have absorbent and other cleanup items readily available for immediate cleanup of spills.
	Allow empty paint cans to dry before disposal.
	Keep paint and paint thinner away from traffic areas to avoid spills.
	Recycle paint, paint thinner, and solvents.
	Establish and implement effective inventory control to reduce paint waste, including tracking date received and expiration dates.
	Use water-based paints when possible.
	Train employees to use the spray equipment properly.
Metal Chip Storage Areas	Store waste chips indoors, if possible.
	Cover outdoors chip storage containers.
	Place chip storage containers on asphalt or concrete surfaces.
	Be sure fluid has completely drained before placing chips in storage containers.
	Continue draining fluids, if necessary. This can be done as simply as tilting containers towards one end and allowing excess fluids to drain through a hole into a residue container.
	Inspect area for leaks or spills.
	Monitor and maintain containers on a regular basis. Empty storage or residue containers and do not allow them to overflow.
Management of Runoff	Use berms, curbs, grassed swales or similar means to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area.
Equipment/Vehicle and Maintenance Areas Inspections and Training	Collect the stormwater runoff from the cleaning area and providing treatment or recycling.
	Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycled on-site. Do not discharge wash water to a storm drain or to surface water.

Pollutant Source	BMPs
Vehicle Fueling	Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering.
	When fueling in uncovered area, use a concrete pad (not asphalt - not chemically resistant to the fuels being handled).
	Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections.
	Use fueling hoses with check valves to prevent hose drainage after filling.
	Use spill and overflow protection devices.
	Cleanup spills and leaks immediately.
	Minimize/eliminate run-on onto fueling areas.
	Collect stormwater runoff and provide treatment or recycling.
	Use dry cleanup methods for fuel area rather than hosing the fuel area down. Sweep up absorbents as soon as spilled substances have been absorbed.
	Regularly inspect and perform preventive maintenance on storage tanks to detect potential leaks before they occur.
	Inspect the fueling area for leaks and spills.
	Provide curbing or posts around fuel pumps to prevent collisions from vehicles.
	Discourage “topping off” of fuel tanks.
	Train personnel on vehicle fueling BMPs.
Vehicle and Equipment Cleaning	Designate vehicle and equipment wash areas that drain to recycle ponds or process wastewater treatment systems.
	Conduct vehicle washing operation indoors or in a covered area.
	Clean wash water residue from portions of the site that drain to stormwater discharges.
	Train employees on proper procedure for washing vehicles and equipment including a discussion of the appropriate location for vehicle washing.
Transporting Chemicals to Storage Areas	Store drums as close to operational building as possible.
	Label all drums with proper warning and handling instructions.
	Forklift operators should be trained to avoid puncturing drums.
Finished Products (Galvanized) Storage	Store finished products indoors, on a wooden pallets concrete pad, gravel surface, or other impervious surface.
Wooden Pallets and Empty Drums	Clean contaminated wooden pallets.
	Cover empty drums.
	Cover contaminated wooden pallets.
	Store drums and pallets indoors.
	Clean empty drums.
	Store pallets and drums on concrete pads.

Pollutant Source	BMPs
Hazardous Waste Storage Areas	Cover and/or enclose storage areas (including temporary cover such as a tarp that prevents contact with precipitation).
	All hazardous waste must be stored in sealed drums.
	Establish centralized satellite drum-storage areas.
	Provide secondary containment around chemical storage areas.
	If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge.
	Check for corrosion and leakage of storage containers.
	Label materials clearly.
	Properly dispose of outdated materials.
	Dike or use grass swales, ditches, or other containment to prevent run-on or runoff in case of spills.
	Post notices prohibiting dumping of materials into storm drains.
	Store containers, drums, and bags away from high traffic routes and surface waters.
	Do not stack containers in such a way as to cause leaks or damage to the containers.
	Use pallets to store containers when possible.
	Store materials with adequate space for traffic without disturbing drums.
	Maintain low inventory level of chemicals based on need.
	Train employees in spill prevention and control and proper hazardous waste management
	Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly.
	Prevent spills and drips.
	Use drip plans, drain boards, and drying racks to direct drips back into a sink or fluid holding tank for reuse.
	Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled.
	Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers.
	Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly.
	Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries).
	Maintain an organized inventory of materials.
	Eliminate or reduce the number or amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials.
	Clean up leaks, drips, and other spills without using large amounts of water.
	Prohibit the practice of hosing down an area where the practice would result in the exposure of pollutants to stormwater.
	Clean without using liquid cleaners whenever possible.
	Perform all cleaning at a centralized station so the solvents stay in one area.
	If parts are dipped in liquid, remove them slowly to avoid spills.
	Do not pour liquid waste down floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.

Hazardous Waste Storage Areas	Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities.
	If operations are uncovered, perform them on concrete pad that is impervious and contained.
	Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills.
	Inspect vehicles closely for leaks and use pans to collect fluid when leaks occur.